XC334

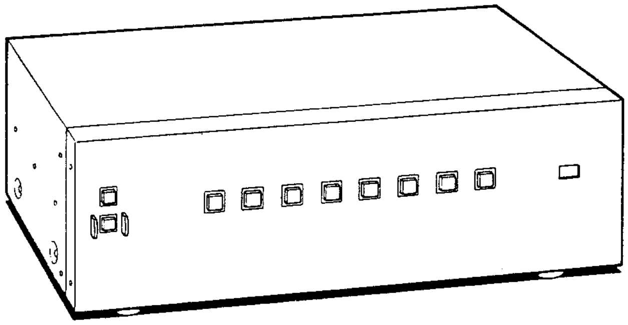
PC-1270M

IFB-10/IFB-1000/RM-1270S

6515

SERVICE MANUAL

AEP Model



Note: The service manual for RM-1270S have been issued separately.

SPECIFICATIONS

Frequency response
RGB: 100 MHz ±3 dB (MONITOR OUT)
50 MHz ±3 dB (REMOTE 1)
40 MHz ±3 dB (when connecting CCQ-10BRS cable)
Video: 15 MHz ±3dB
Audio: 25 kHz ±2dB

MONITOR OUT connectors
R: BNC type
Red signal output, 0.7 Vp-p ±3 dB, 75 ohms impedance
G: BNC type
Green signal output, 0.7 Vp-p ±3 dB, 75 ohms impedance
Sync on green signal output, 1 Vp-p ±3 dB, 75 ohms impedance
B: BNC type
Blue signal output, 0.7 Vp-p ±3 dB, 75 ohms impedance
SYNC HD: BNC type
Horizontal sync signal/composite sync signal output, 1 Vp-p ±3 dB, 75 ohms impedance
VD: BNC type
Vertical sync signal output, 1 Vp-p ±3 dB, 75 ohms impedance
Y/C: 4-pin DIN
Y - 1 Vp-p±3dB, 75 ohms impedance
C(NTSC) - 0.286 Vp-p ±3 dB, 75 ohms impedance
C(PAL) - 0.3 Vp-p ±3 dB, 75 ohms impedance
VIDEO: BNC type
Composite video signal output, 1 Vp-p ±3 dB, 75 ohms impedance
AUDIO L/R: phono jack
Audio signal output, 436 mVrms, less than 1 kohm impedance

CONTROL S connectors
IN: minijack, 5 Vp-p ±2 V, less than 47 kohms impedance
OUT: minijack, 5 Vp-p ±1 V, less than 100 ohms impedance
RGB input signal interface board
R: BNC type
Red signal input, 0.7 Vp-p ±3 dB, 75 ohms terminated
G/G SYNC: BNC type
Green signal input, 0.7 Vp-p ±3 dB, 75 ohms terminated
Sync on green signal input, 1 Vp-p ±3 dB, 75 ohms terminated
B: BNC type
Blue signal input, 0.7 Vp-p ±3 dB, 75 ohms terminated
SYNC/HD: BNC type
Horizontal sync signal and composite sync signal input, 0.6 to 8 Vp-p, (fH=15 kHz to 75 kHz), high impedacne

– Continued on next page –

MICROFILM

SIGNAL INTERFACE SWITCHER

SONY®

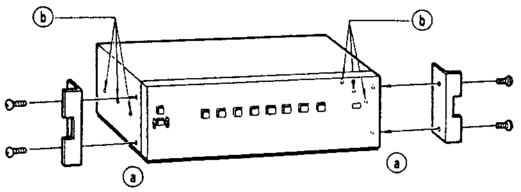
6515

VD: BNC type
Vertical sync signal input,
0.6 to 8 Vp-p, (fV=38 Hz to 150 Hz),
high impedance
AUDIO IN: phono jack
Audio signal input, 436 mVrms

Video input signal interface board
Y/C IN: 4-pin DIN
Y - 1 Vp-p ±3 dB, 75 ohms terminated
C(NTSC) - 0.286 Vp-p ±3 dB, 75 ohms terminated
C(PAL) - 0.3 Vp-p ±3 dB, 75 ohms terminated
VIDEO IN: BNC type
Composite video signal input,
1 Vp-p ±3 dB, 75 ohms terminated
AUDIO IN: phono jack
Audio signal input, 436 mVrms

Power requirements	220 to 240 V AC, 50/60 Hz
Power consumption	50 W
Dimensions	Approx. 430 x 133 x 290 mm (w/h/d) (17 × 5¼ × 11½ inches)
Weight	Approx. 7 kg (15 lb 7 oz)
Accessories supplied	Remote commander RM-1270S (1) IEC designation R6 (size AA) batteries (2) AC power cord (1) L-shaped holder (1 set)

To Mount in the EIA 19-inch Rack



Attach the supplied holders by using the mounting holes ⓐ (× 4), with the supplied screws.
Attach also the sliding rails (optional) by the mounting holes ⓑ (× 6).
Then, mount the unit in the rack.
For mounting details, refer to the instruction manual of the 19-inch rack.

Note

Be sure to use the supplied screws to attach the holders and sliding rails to this unit.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

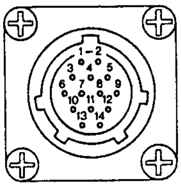
SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

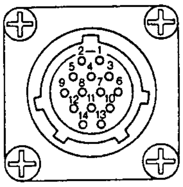
Pin assignment

REMOTE 1 connectors (14-pin)

IN (male)



OUT (female)



Pin No.	Signal	Signal level
1	GND	Ground
2	HD/C.SYNC	1 Vp-p±3 dB, 75 ohms
3	SIRCS	5 Vp-p±1 V
4	N.C.	No connection
5	GND (SIRCS)	Ground
6	B/C	B: 0.7 Vp-p±3 dB, 75 ohms C (NTSC): 0.286 Vp-p±3 dB, 75 ohms C (PAL): 0.3 Vp-p±3 dB, 75 ohms
7	GND (B.R)	Ground
8	GND (G)	Ground
9	G/Y	G: 0.7 Vp-p (or 1 Vp-p for sync on green) ±3 dB, 75 ohms Y: 1 Vp-p±3 dB, 75 ohms
10	RGB/Video	5 V/0 V
11	R/C. video	R: 0.7 Vp-p±3 dB, 75 ohms Composite video: 1 Vp-p±3 dB, 75 ohms
12	C.video/YC	5 V/0 V
13	Audio	436 mVrms, output impedance 1 kohm
14	V.sync	1 Vp-p±3 dB, 75 ohms

Design and specifications are subject to change without notice.

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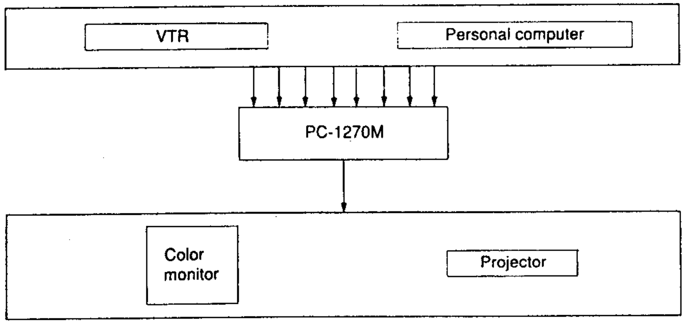
SECTION 1
GENERAL

1-1. FEATURES

- **Eight pictures can be selected to send to a monitor or a projector**
  This unit can mount up to eight signal interface boards which allow the connection of up to eight VTRs or personal computers with this unit. The picture from connected equipment can be selected with the INPUT SELECT button on the front panel.

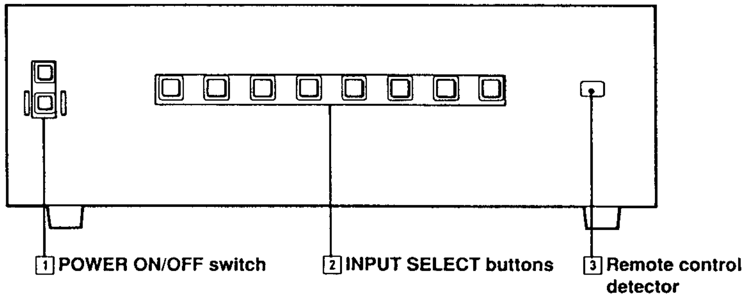
- **The input source of the projector can be selected.**
  With the supplied remote commander, the picture which is input from other equipment than this unit to the projector can be selected.

- **CONTROL S connectors**
  By connecting the CONTROL S connectors of this unit and those on the other Sony equipment, this unit can be operated through the other Sony equipment, or the other Sony equipment can be operated through this unit.

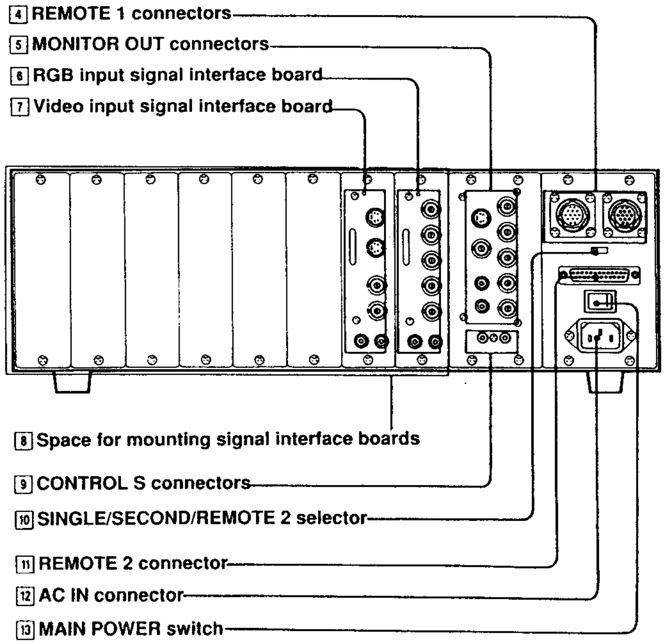

VTR
Personal computer
PC-1270M
Color monitor
Projector

1-2. LOCATION AND FUNCTION OF PARTS

Front panel


1 POWER ON/OFF switch
2 INPUT SELECT buttons
3 Remote control detector

Rear panel


4 REMOTE 1 connectors
5 MONITOR OUT connectors
6 RGB input signal interface board
7 Video input signal interface board
8 Space for mounting signal interface boards
9 CONTROL S connectors
10 SINGLE/SECOND/REMOTE 2 selector
11 REMOTE 2 connector
12 AC IN connector
13 MAIN POWER switch

1 POWER ON/OFF switch

To turn on the power, press ON with the MAIN POWER switch on the rear panel set to ON. The ON button lights up in green.

To turn off the power, press OFF(STANDBY). The OFF button lights up in red and the unit enters the standby mode.

2 INPUT SELECT buttons

The number of each button indicates the position of the signal interface board to which the input source is connected.

To select the equipment to be monitored, press the INPUT SELECT button which corresponds the board to which the equipment is connected. The button lights up. When the power is turned on in the standby mode, the button of the previously selected board lights up. Once the MAIN POWER switch has been turned off, no button will light up when the power is turned on afterwards.

3 Remote control detector

Point the supplied RM-1270S remote commander here.

4 REMOTE 1 connectors (14-pin)

IN: When connecting two switchers, connect to the REMOTE 1 OUT connector of another switcher. In this case, this switcher functions as the first one of the two.

OUT: Connect to the REMOTE connector of a projector. When connecting two switchers, connect to the REMOTE 1 IN connector of another switcher. In this case, this switcher functions as the second one of the two.

5 MONITOR OUT connector

Outputs the signal selected with the INPUT SELECT buttons. Connect to a video monitor or a projector.

Y/C (4-pin): Outputs the luminance (Y) signal and chrominance (C) signal separately.

VIDEO (BNC type): Outputs the composite video signal.

AUDIO L/R (phono jack): Outputs the stereo audio signal. In case of the monaural audio signal, the same signal is output from both L and R jacks.

R (BNC type): Outputs the red signal.

G (BNC type): Outputs the green signal.

B (BNC type): Outputs the blue signal.

SYNC/HD (BNC type): Outputs the composite sync signal or the horizontal sync signal.

VD (BNC type): Outputs the vertical sync signal.

CONTROL S IN (mini jack): Connect to the CONTROL S OUT jack of a Sony equipment. The connected Sony equipment can be controlled on the switcher.

CONTROL S OUT (mini jack): Connect to the CONTROL S IN jack of a Sony equipment. The switcher can be controlled on the connected Sony equipment.

6 RGB input signal interface board

Indicator (red): Lights up when the signal connected to this board is selected with the INPUT SELECT button.

RGB IN connector (BNC type)

R: Input the red signal here.

G/G SYNC: Input the green signal or the sync on green signal.

B: Input the blue signal.

SYNC/HD: Input the composite sync signal or the horizontal sync signal.

VD: Input the vertical sync signal.

AUDIO IN L/R connectors (phono jack): Connect to the audio output connectors of an audio equipment. Connect a monaural audio source to L(MONO).

7 Video input signal interface board

Indicator (red): Lights up when the signal connected to this board is selected with the INPUT SELECT button.

Y/C IN connector (4-pin): Connect the Y/C output of a video equipment. The luminance (Y) signal and chrominance (C) signal can be input separately. This connector is terminated at 75 ohms.

Y/C OUT connector (4-pin): Through-output of the signal input to the Y/C IN connector. Connect to the Y/C input of a monitor. When a cable is connected to this connector, the 75 ohms termination of the Y/C IN connector is released.

VIDEO IN connector (BNC type): Connect to a video equipment to input the composite video signal. This connector is terminated at 75 ohms.

VIDEO OUT connector (BNC type): Through-output of the signal input to the VIDEO IN connector. Connect to a monitor. When a cable is connected to this connector, the 75 ohms termination of the VIDEO IN connector is released.

AUDIO IN L/R connectors (phono jack): Same as that of the RGB input signal interface board.

Note

When cables are connected to both Y/C IN and VIDEO IN connectors, the signal input to the Y/C IN connector has priority over the one input to the VIDEO IN connector, and output from the Y/C connector of the MONITOR OUT connectors. The signal input to the VIDEO IN connector can be output from the VIDEO connector of the MONITOR OUT connectors only when no cable is connected to the Y/C IN connector.

8 Space for mounting signal interface boards

Up to eight signal interface boards of 35 mm panel width can be mounted.

9 CONTROL S connectors

Connect to the CONTROL S connector on the other Sony equipment. This unit can be operated through the connected equipment, or the connected equipment can be operated through this unit.

10 SINGLE/SECOND/REMOTE 2 selector

SINGLE: Set to this position when the switcher is the first one of the two connected switchers.

SECOND: Set to this position when the switcher is the second one of the two connected switchers.

REMOTE 2: Set to this position when operating this unit on a console connected to the REMOTE 2 connector. In this case, the input source cannot be selected with the remote commander.

11 REMOTE 2 connector (25-pin)

When operating the unit on a console located in other room, connect to the console.

12 AC IN connector

Connect to an AC outlet.

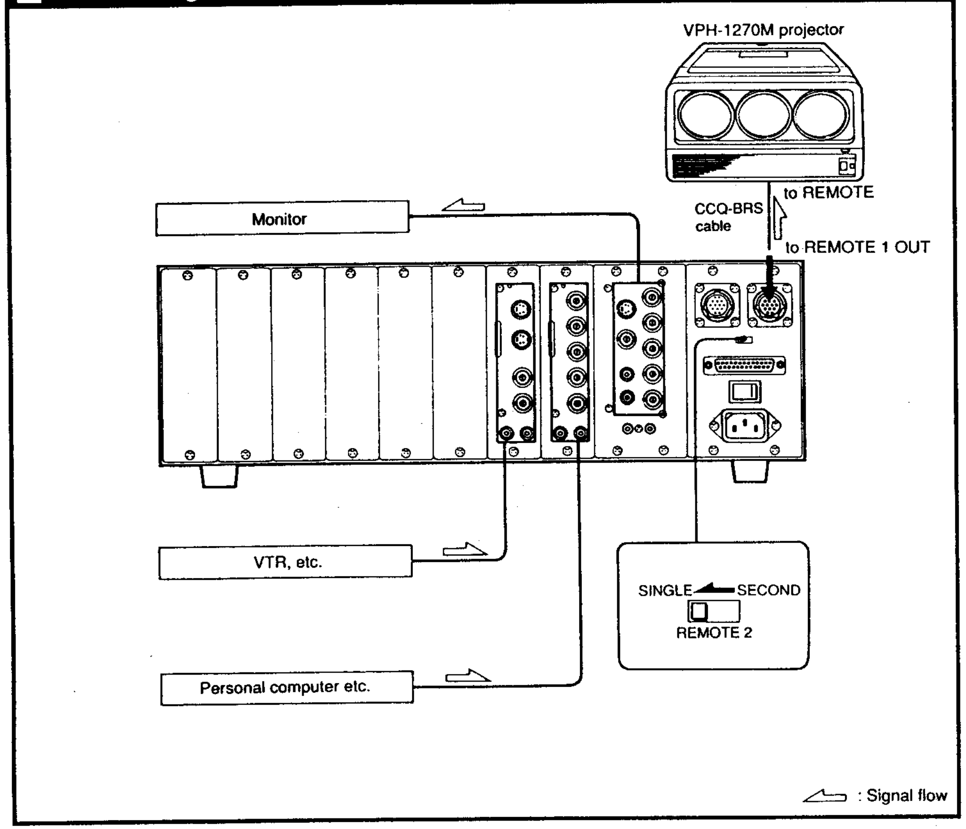
13 MAIN POWER switch

Press the ON side to set the unit in the standby mode. The OFF button on the front panel lights up.

Press the OFF side to turn off the power supply.

1-3. CONNECTIONS

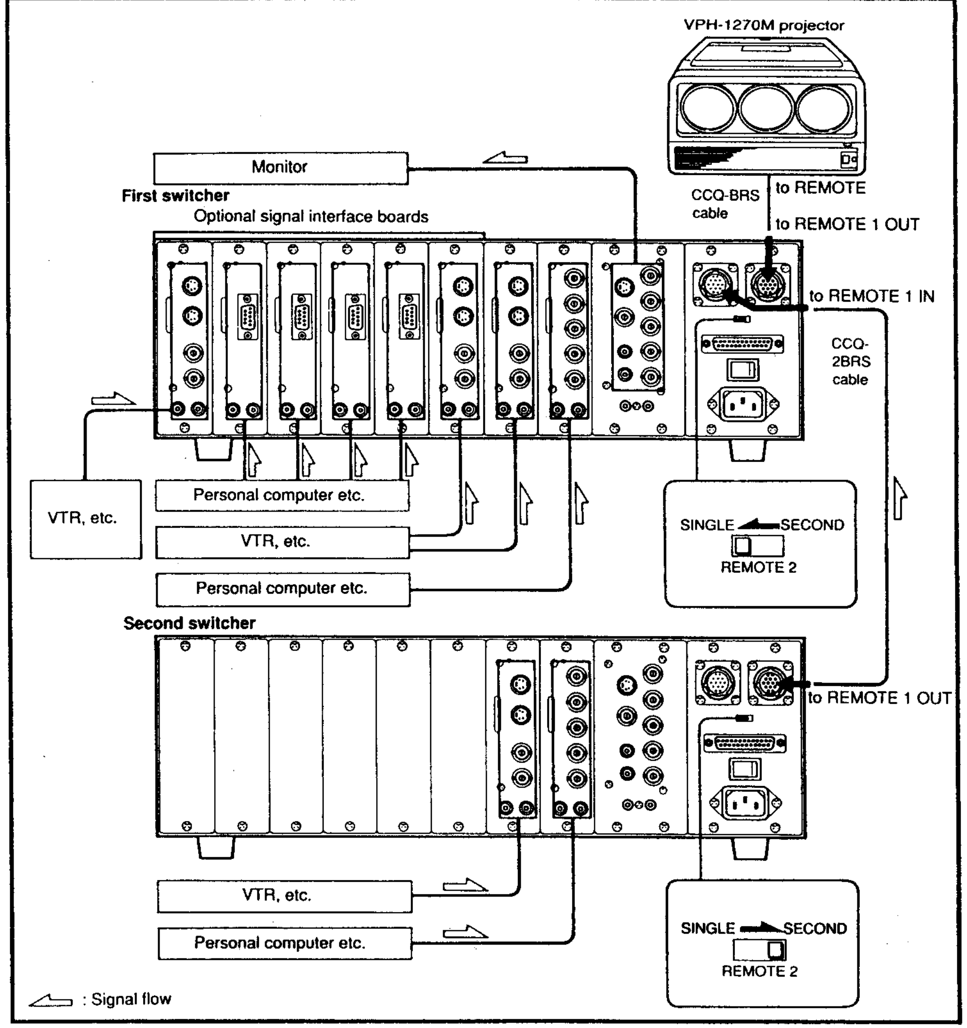
1 When Using One Switcher


VPH-1270M projector
to REMOTE
CCQ-BRS cable
to REMOTE 1 OUT
Monitor
VTR, etc.
Personal computer etc.
SINGLE SECOND
REMOTE 2
: Signal flow

Notes on connection

- Turn off the power to all equipment before making any connection.
- Make firm connection. A loose connection may cause hum or noise.
- When disconnecting a cord, pull it out by grasping the plug. Never pull the cord itself.
- To prevent interference, turn off all connected equipment which is not currently in use.
- If there is noise in the picture or sound, try moving the equipment further apart.

2 When Using Two Switchers and Optional Signal Interface Boards Mounted


VPH-1270M projector
Monitor
First switcher
Optional signal interface boards
CCQ-BRS cable
to REMOTE
to REMOTE 1 OUT
to REMOTE 1 IN
CCQ-2BRS cable
VTR, etc.
Personal computer etc.
VTR, etc.
Personal computer etc.
SINGLE SECOND
REMOTE 2
Second switcher
to REMOTE 1 OUT
VTR, etc.
Personal computer etc.
SINGLE SECOND
REMOTE 2
: Signal flow

Note

For details on the optional signal interface boards, refer to the manual of the signal interface boards.
For mounting the signal interface board.

1-4. MOUNTING THE SIGNAL INTERFACE BOARD

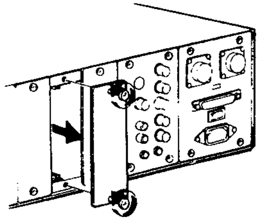
By mounting the optional signal interface board IFB-10, IFB-20, and IFB-1000 on this unit, the signals from several VTRs and personal computers can be connected.

Precautions

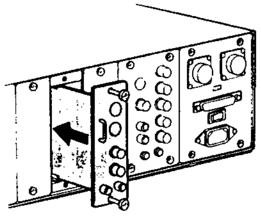
- Turn off the power before mounting or dismounting operation.
- Avoid touching the pins and electronic parts on the board when removing it from the package.
- The board consists of high-precision electronic parts. Do not drop it or bump it against other objects.
- If a problem occurs, contact an authorized Sony representative.

Mounting the Signal Interface Board

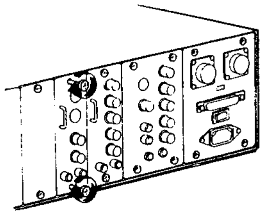
1 **Loosen the screws completely and remove the panel.**



2 **Push in the board along the rail.**

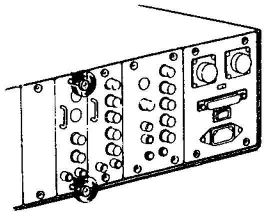


3 **Secure the board with the screws.**

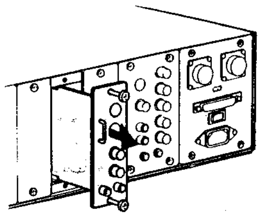


Dismounting the Signal Interface Board

1 **Loosen the screws completely.**

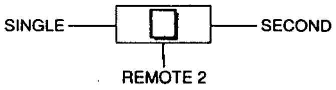


2 **Hold the handle and pull out the board.**



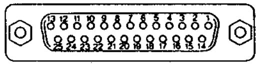
1-5. USING THE REMOTE 2 CONNECTOR

When operating this unit on the console connected to the REMOTE 2 connector, set the SIGNAL/SECOND/REMOTE 2 selector to REMOTE 2.



Pin Function of the REMOTE 2 Connector

Pin assignment (D-sub, 25-pin, female)



Pin No.	Name	Pin No.	Name
1	B1	14	B2
2	B3	15	B4
3	B5	16	B6
4	B7	17	B8
5	P1	18	P2
6	GND	19	POWER ON
7	POWER OFF	20	SEL 1
8	SEL 2	21	SEL 3
9	SEL 4	22	SEL 5
10	SEL 6	23	SEL 7
11	SEL 8	24	$\overline{\text{SELECT}}$
12	GND	25	GND
13	GND		

When operating this unit on a console connected to the REMOTE 2 connector, each pin functions as follows:

1) By short-circuiting the B1 - B8 with GND, the signal is selected. B1 - B8 correspond to the [1] - [8] INPUT SELECT buttons respectively.

2) By short-circuiting the P1 and P2 with GND, the power is turned on or off. P1 and P2 correspond to the POWER [ON] and [OFF] buttons respectively.

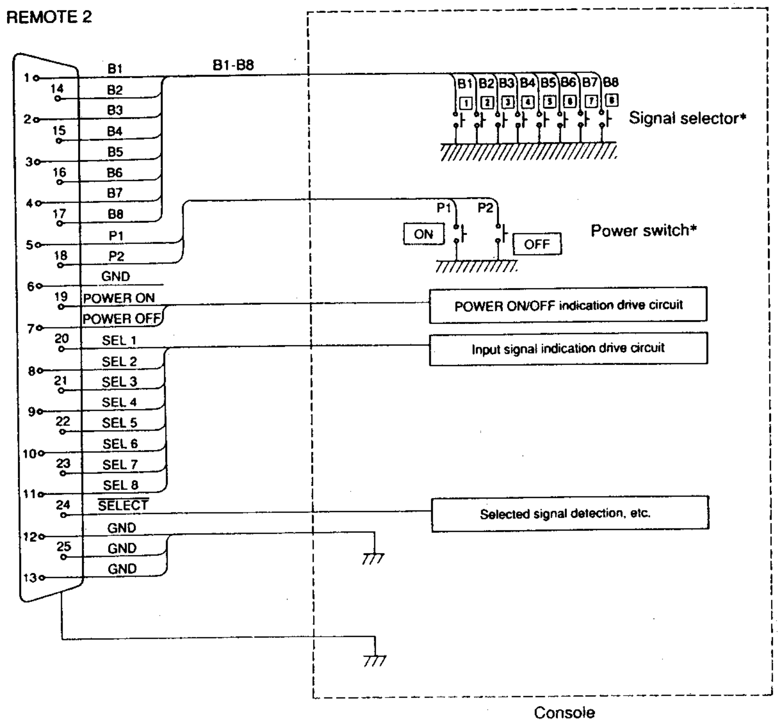
3) SEL 1 - SEL 8 become high state (5 V) when the corresponding signal among 1 - 8 is selected. Normally they are at low state (0 V).

4) POWER ON becomes high state (5 V) when the power is turned on, and becomes low state (0 V) when the power is turned off.
POWER OFF becomes low state (0 V) when the power is turned on, and becomes high state (5 V) when the power is turned off.

5) $\overline{\text{SELECT}}$ becomes low state (0 V) when a signal among 1 - 8 is selected, and becomes high state (5 V) when no signal is selected.

Using the REMOTE2 Connector

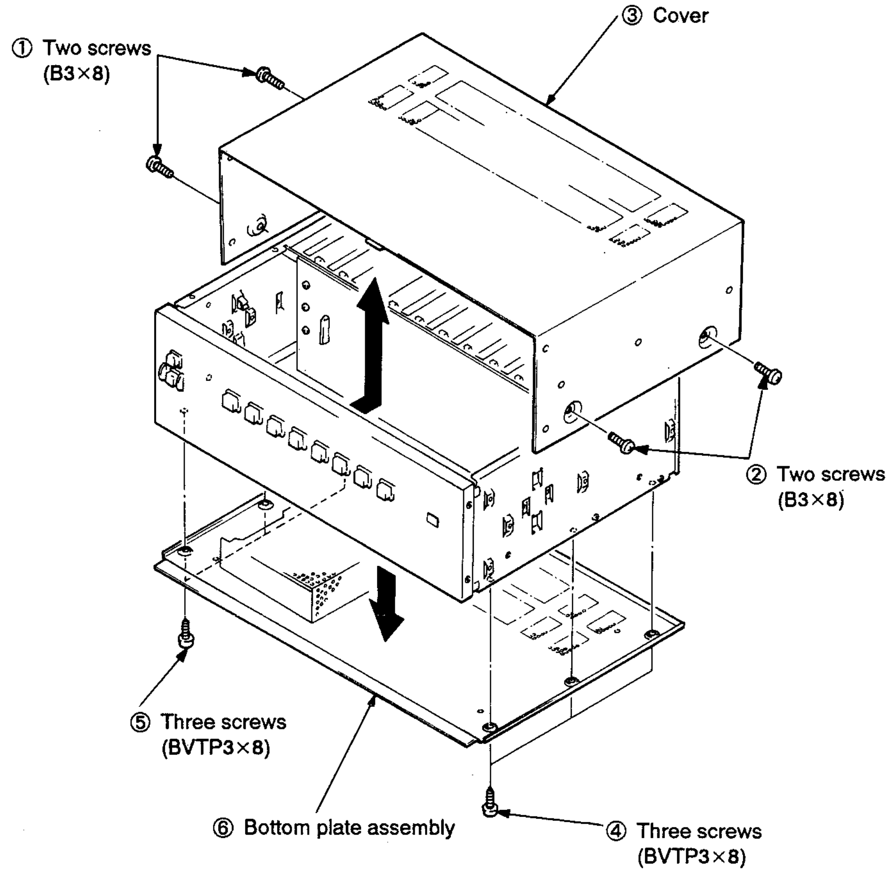
Connection Example


REMOTE 2
1
14
2
15
3
16
4
17
5
18
6
19
7
20
8
21
9
22
10
23
11
24
12
25
13
B1
B2
B3
B4
B5
B6
B7
B8
P1
P2
GND
POWER ON
POWER OFF
SEL 1
SEL 2
SEL 3
SEL 4
SEL 5
SEL 6
SEL 7
SEL 8
$\overline{\text{SELECT}}$
GND
GND
GND
B1-B8
B1 B2 B3 B4 B5 B6 B7 B8
1 2 3 4 5 6 7 8
Signal selector*
P1 P2
ON
OFF
Power switch*
POWER ON/OFF indication drive circuit
Input signal indication drive circuit
Selected signal detection, etc.
Console

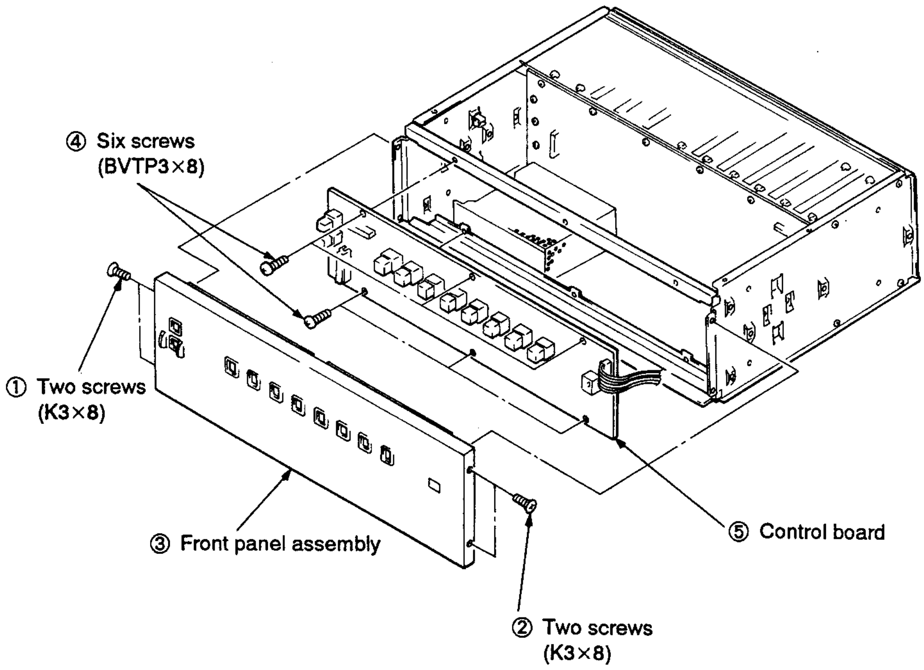
* Be sure to use a momentary switch for signal selection and power on/off.

SECTION 2
DISASSEMBLY

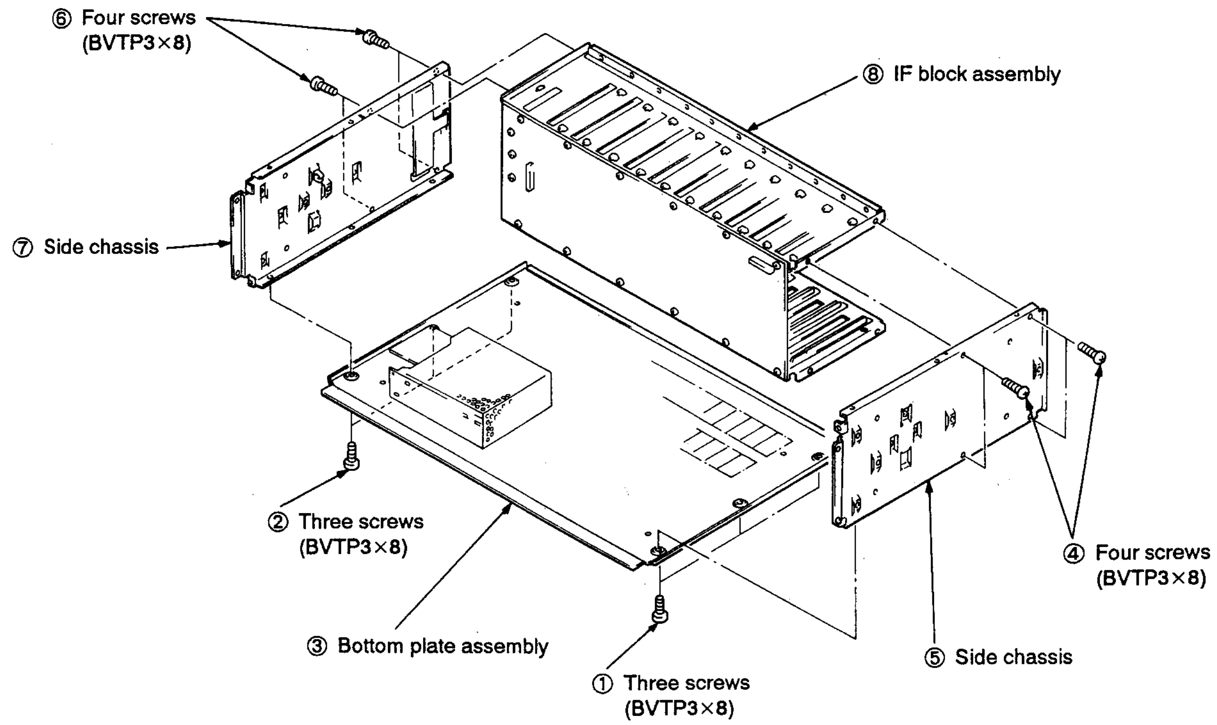
2-1. COVER AND BOTTOM PLATE REMOVAL


③ Cover
① Two screws
(B3×8)
② Two screws
(B3×8)
⑤ Three screws
(BVTP3×8)
⑥ Bottom plate assembly
④ Three screws
(BVTP3×8)

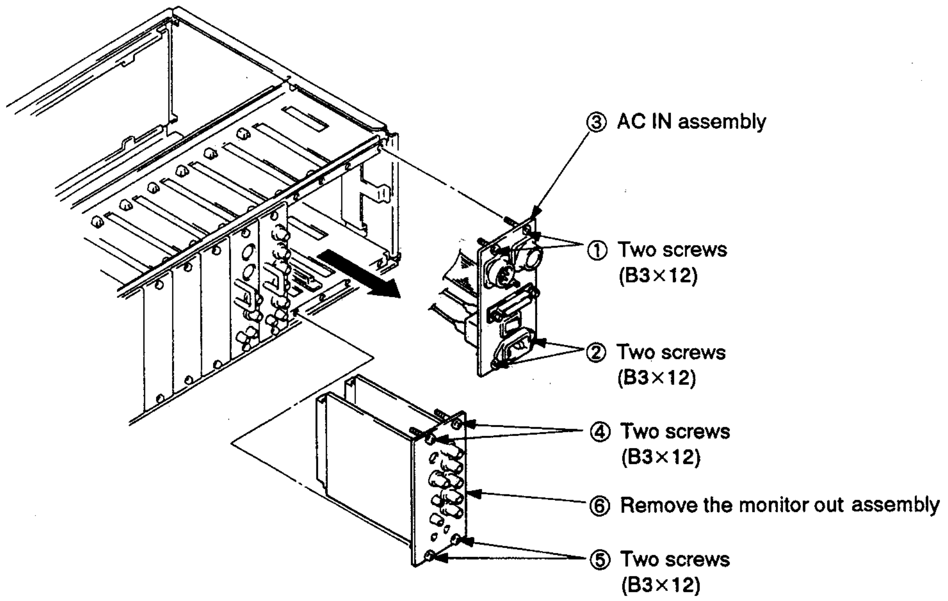
2-2. FRONT PANEL ASSEMBLY AND CONTROL BOARD REMOVAL


④ Six screws
(BVTP3×8)
① Two screws
(K3×8)
③ Front panel assembly
⑤ Control board
② Two screws
(K3×8)

2-3. IF BLOCK REMOVAL

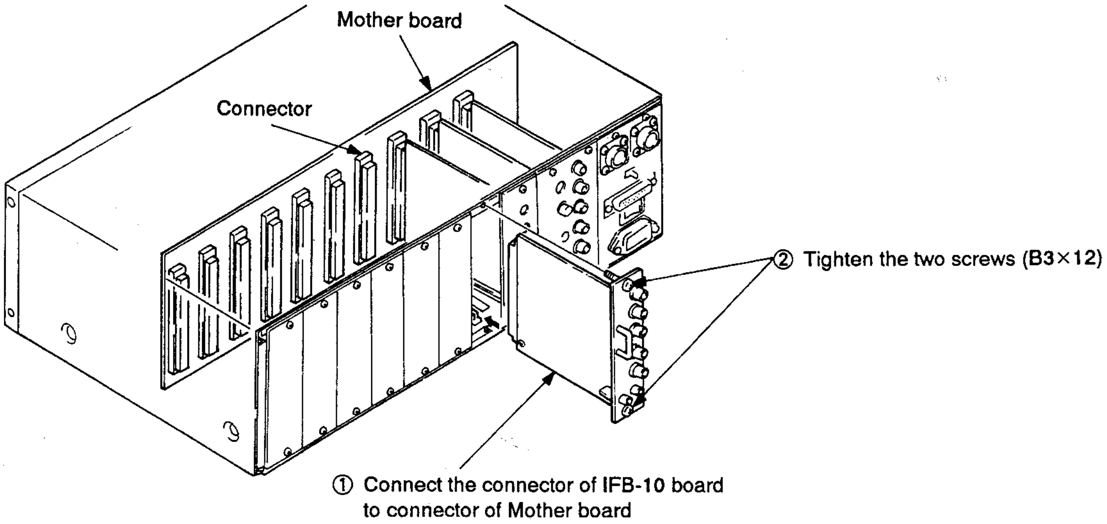

⑥ Four screws
(BVTP3×8)
⑧ IF block assembly
⑦ Side chassis
② Three screws
(BVTP3×8)
④ Four screws
(BVTP3×8)
③ Bottom plate assembly
⑤ Side chassis
① Three screws
(BVTP3×8)

2-4. AC IN ASSEMBLY AND MONITOR OUT ASSEMBLY REMOVAL


③ AC IN assembly
① Two screws
(B3×12)
② Two screws
(B3×12)
④ Two screws
(B3×12)
⑥ Remove the monitor out assembly
⑤ Two screws
(B3×12)

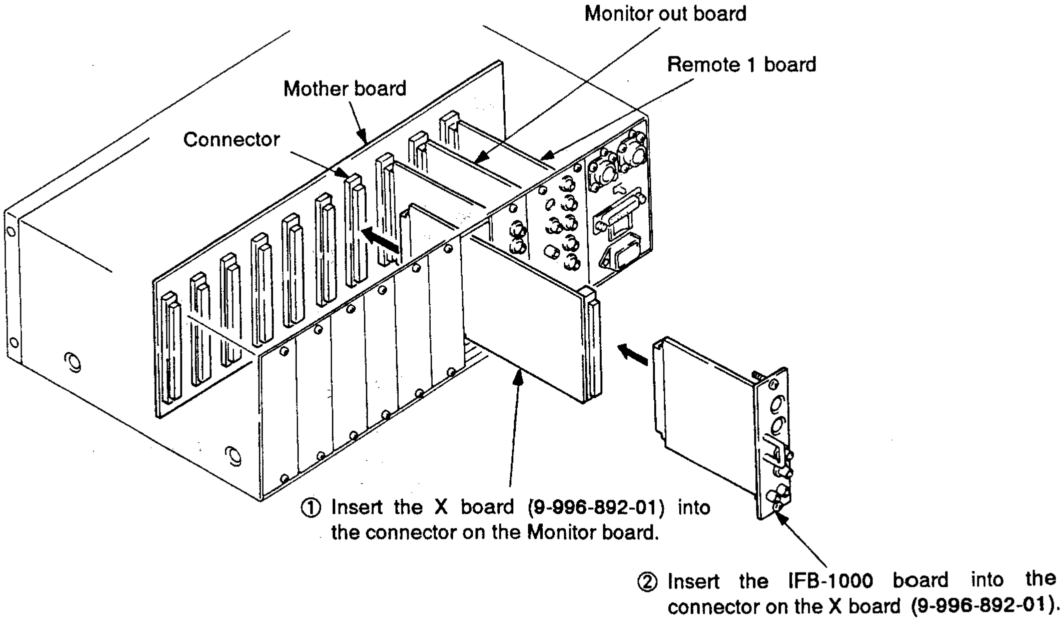
2-5. IFB-10 BOARD INSTALLATION

Note: Other IFB boards can be installed in the same way.
(When installing, remove a mask plate.)

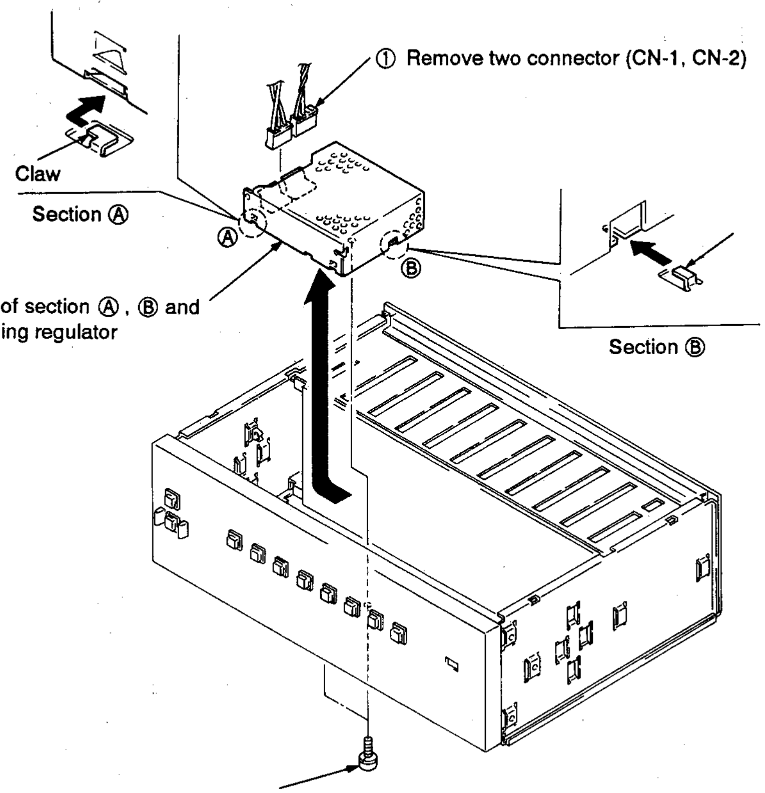

Mother board
Connector
② Tighten the two screws (B3×12)
① Connect the connector of IFB-10 board to connector of Mother board

2-6. INSPECTION METHOD OF THE IFB-1000 BOARD

Note: Other IFB boards can be inspected in the same way.


Monitor out board
Remote 1 board
Mother board
Connector
① Insert the X board (9-996-892-01) into the connector on the Monitor board.
② Insert the IFB-1000 board into the connector on the X board (9-996-892-01).

2-7. REMOVAL OF THE SWITCHING REGULATOR


Claw
Section Ⓐ
Ⓐ
Ⓑ
Section Ⓑ

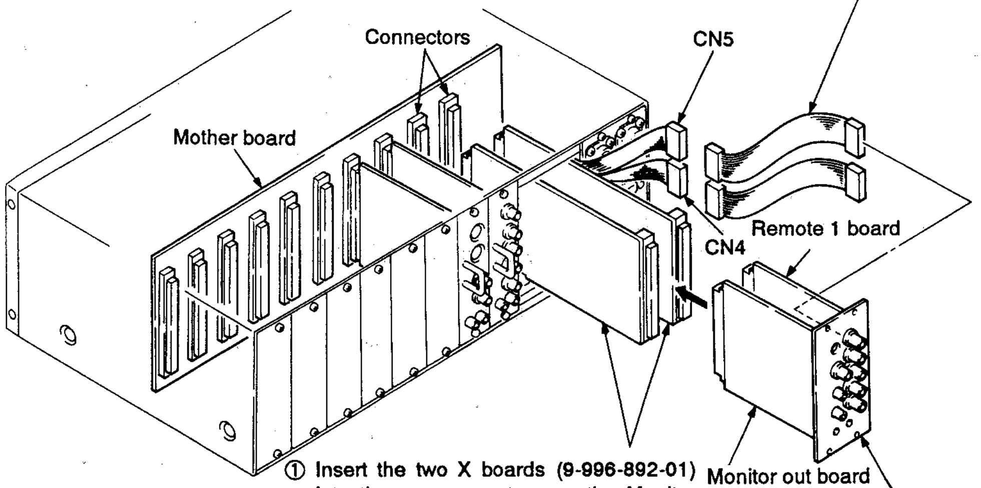
① Remove two connector (CN-1, CN-2)

③ Remove two claws of section Ⓐ, Ⓑ and remove the swwitching regulator

② Two screws (PS3×8)

2-8. INSPECTION METHOD OF THE MONITOR OUT ASSEMBLY (MONITOR OUT AND REMOTE 1 BOARDS)

③ Connect two connectors (CN4, CN5) on the Remote 1 board with two extension cable (9-996-893-01).


Connectors
CN5
Mother board
Remote 1 board
CN4
Monitor out board

① Insert the two X boards (9-996-892-01) into the two connectors on the Monitor board.

② Insert the Remote 1 and Monitor out boards into the two connectors on the two X boards (9-996-892-01).

SECTION 3
CIRCUIT DESCRIPTION

3-1. IFB-10 BOARD (PC-1270 RGB INPUT BOARD)

IFB-10 board is the signal input board provided with R, G, B, HD, VD and AUDIO (L/R) input connector.

1. Video Buffer

The signal input to the R, G and B connectors are terminated with 75Ω terminator and is input to the video buffer U1, U2 and U3, where, with the 100 MHz band width, the voltage gain is controlled to 1 by R14, R15 and R16, respectively.
Then the R, G and B signals output from the video buffer pass through the relays RL1, RL2 and RL3 and are output from Pins (21-a•c), (25-a•c) and (29-a•c) of 64-pin connector.

2. Sync Signal Interface

The signals input to HD and VD connectors are input to the base of Q201 and Q202. Since a +4.5V bias is applied to Q201 and Q202, input 0 level is level-shifted to +4.5V. The positive peak voltage are charged to Q205/Q206 emitter and the negative voltage to Q203/Q204. The intermediate DC voltage of upper and lower peaks of HD and VD are input to Pins ③ and ⑤ of UA201. The HD and VD output signals passed through Q201 and Q202 is applied to Pins ② and ⑥ of UL201, where DC voltage at Pins ① and ⑦ are compared with the signal levels applied to Pins ② and ⑥ . Therefore high level is output from Pins ③ and ⑤ when the signal level is higher than DC voltage, low level when lower.

3. Audio

Input the audio signal from L (monaural) and R connectors. When no plug is connected to R connector, L (monaural) and R line is shorted internally by the switch built-in the R terminal. Input signals pass through the buffers composed of Q101/Q102 and Q111/Q112, then are output from the analog switch UA101.

4. Power Supply

Power supply voltage is supplied from Pin (4-a•c) of the 64-pin connector. When $\overline{\text{SEL}}$ signal output from Pin (19-c) becomes low, +12V and +9V voltages are supplied to the circuit via Q6.
Q4, Q5 and Q6 are the regulators to stabilize the power supply voltage to approximately 11.5V. Q1, Q2 and Q3 form a current detection-type protector. When a current in excess of 600 mA flows in R19, Q1 turns on and a current flows into bases of Q2 and Q3. Q3 output the protector signal to peripheral block from Pin (2-a). Q2 turns Q6 off to prevent a current from flowing into the circuit.

3-2. IFB-1000 BOARD (VIDEO INPUT BOARD)

1. Video Buffer

The signals input from the video IN and Y/C IN are terminated at 75Ω , and are input to video buffers U1, U2 and U3. However, when the signals are input simultaneously to the video IN and Y/C IN, the Y/C input signal is given priority and the video IN input signal is disconnected. When both output side of the video and Y/C connectors are connected, each 75Ω terminator is automatically disconnected.
U1, U2 and U3 are the video buffers for the composite video, Y and C signals, respectively. When Y/C signal is input, the Y/C signal mixed at Q8, R15, R16 and R17 are input to U1.
The signals passed through U1, U2 and U3 pass through relays RL2, RL3 and RL4, then are output from the 64-pin connector.

2. Audio

Input the audio signal from L (monaural) and R connectors. When no plug is connected to R connector, L (monaural) and R line is shorted internally by the switch built-in the R terminal. Input signals pass through the buffers composed of Q101/Q102 and Q111/Q112, then are output from the analog switch UA101.

3. Power Supply

Power supply voltage is supplied from Pin (4-a•c) of the 64-pin connector. When $\overline{\text{SEL}}$ signal output from Pin (19-c) becomes low, the voltage is supplied into the circuit via Q9.
Q9, Q10 and Q11 are the regulators to stabilize the power supply voltage to approximately 11.5V.
Q3, Q4 and Q5 form a current detection-type protector circuit. When a current in excess of 600 mA flows into R27, Q3 turns on and a current flows into the bases of Q4 and Q5. Q4 outputs the protector signal from Pin (2-a) to a peripheral block. Q5 sets the Q11 base voltage to 0, and turns off across the collector to emitter of Q9. Thus, power will not supplied.

4. Y/C-Video Selection

When Y/C IN connector is connected, its built-in switch is switched. The switch selects RL1 via Q1 and Q7, then the Y/C-mixed signal is fed to pin (21-a•c). C•video/$\overline{\text{YC}}$ signal of Pin (17-c) is applied to the discrimination signal from Q2.
When $\overline{\text{SEL}}$ becomes low and this board is selected, the state of which is transferred by the signal output from Q12.

3-3. MOTHER BOARD

Mother board consists of the signal line from respective input boards and the power supply block.

1. D+5V Power

When the main power switch of the rear panel turns on and AC power is fed to the unit, +12V is supplied to the mother board via switching regulator. The voltage of +12V line passes through the noise filter NF1 and is input to regulator UR1. +5V output from UR1 is supplied to each board via CN6, and is used for power supply for the microprocessor and the remote control system.

2. +12V, +9V, +5V

When the main power of the rear panel is turned on, +12B is output. And then turn on via the switch of the front panel, POWER signal input from Pin ⑪ of CN7 becomes low. Then Q1 is turned on through Q6 and +12A is output, accordingly +5V and +9V are output through UR2 and UR3.

3. Protector

The excessive current protector is composed of R14, Q1, Q2, Q3 and Q4. When a total current is over 2.7A, this circuit operates and +12AV, +9V and +5V power supplies are turned off. When PROTECT line input from Pin (2-a) becomes low, the same operation as above is obtained.

3-4. MONITOR OUT

1. Video Buffer

R/C video, G/Y and B/C signals input from Pins (21-a•c), (25-a•c) and (29-a•c) are input to U1, U2 and U3. The signals passed through the video buffers are selected by relays RL1, RL2 and RL3, and each prescribed signal is output from B.G.B of monitor OUT, Video and Y/C terminals.

2. Sync Signal Processing

HD/C sync and VD are input from Pins (12-a•c) and (14-a•c), respectively. Pins ⑫ and ⑩ of UL3 become low when the sync signal has positive logic level, high when negative logic level.

When SW1 is OFF, HD/C-sync, VD that have the same polarity as the input signal are output from pins 3 and 6 of UL3, respectively. When SW1 is ON, regardless of the polarity of input signal, the sync signal with negative logic is output from pins 3 and 6 of UL3.

Q301, UL301 and UA301 generate the positive logic pulse corresponding to the falling timing of HD. This pulse is added to the pulse of vertical sync signal by UL302. Thus, the composite sync signal with negative logic is output from pin 8 of UL302.

Q1/Q2 and Q3/Q4 are buffers for sync signal where the TTL level signal is converted to analog level.

3. RGB/Video

RL1 to RL3 are selected with UL1 by using RGB/video signal of Pin (17-a). Relay is selected so that R.G.B. signal is output when the resulting signal is high and that the video signal when low.

4. Control S

The built-in switch is on when IN terminal of J105 is no plug connected, each S IN2 and S IN1 signal from the infrared rays receiving block passes through Pins (15-a) and (13-c) and is output to the SW/CONTROL board, allowing to remote control by means of infrared rays.

When a plug is connected to IN terminal of J105, the built-in switch turns off and then the receiving block signal from S IN2 is disconnected. In this case, the signal from the connected plug is used for controlling.

3-5. REMOTE

1. Video Buffer

U1, U2 and U3 are the video buffers for the R/C video, G/Y and B/C signals, respectively. The signals from Pins (21-a•c), (25-a•c) and (29-a•c) are input when SELECT signal from Pin (19-c) is low level. When SELECT signal is high, the signals from Pins ⑪, ⑨ and ⑥ of CN4 are input. Input selection is done by relays RL1, RL2 and RL3.

2. Sync Signal

Q1/Q2 and Q3/Q4 form the buffers for the sync signal, where the sync signals input from Pins (12-a•c)/(14-a•c) and Pins ⑤ and ③ of UL3 are converted to analog level. UL3 operates as a interface to convert the analog level sync signal input from Pins ② and ⑭ of CN4 to TTL level. 0.6 Vdc is supplied to Pins ① and ⑦ of UL3, high level is output when input voltage is over 0.6V. The UL3 operates only when SELECT signal is high level.

3. Audio

Q101/Q102/Q103 and Q121/Q122/Q123 are the video buffers for the audio L/R signals input from Pins (7-a) and (8-a). The signal output from Q103 and Q123 are eliminated DC components by T101 and T121 before output from Pins (8-c) and (7-c). Q141 and Q142 are the audio buffers for output to REMOTE 1 connector that L and R signals are mixed and output to Pin ⑬ of CN5.

When SELECT signal is high, the signal from Pin ⑬ of CN4 is input to the audio buffer. In this case, Pins (8-a) and (7-a) is short-circuited by RL4.

3-6. SW/CONTROL BOARD

1. Sircs signal encoder

UL2 is a IC to generate the sircs signal.

The prescribed sircs code is output from Pin ㉙ by means of short-circuit across terminals F0 to F7, G0, H1 and E0. UA2 functions as a switch to short-circuit F0 to F7 and E0 of UL2. When SW1 to SW8 are pressed, UA2 is switched by the signal output from the encoder UL4. UA3 functions as a switch to turn the power on/off. When Pins ⑫ (G0), ㉕ (F2) and ㉔ (F3) are short-circuited, the sircs code for controlling the power on/off is output.

Pins ⑦ and ⑥ of UL2 control the output code. When Pin ⑥ is high and Pin ⑦ is low, the code for operating PC-1270 in the single mode is output. When Pin ⑥ is low and Pin ⑦ is high and when Pin ⑥ is high and Pin ⑦ is high, the code for operating in the second mode and for in the remote 2 mode is output, respectively.

2. Sircs signal decoder

UL1 decodes the sircs signal and selects channels and output the control signal for turning the power on/off. $\overline{\text{SEL1}}$ to $\overline{\text{SEL8}}$ signals are used for discriminating the selected channel. Among $\overline{\text{SEL1}}$ to $\overline{\text{SEL8}}$, the signal corresponding to the selected channel becomes low. $\overline{\text{POWER}}$ signal becomes low when the power is on, high when off (standby). MODE A of Pin ⑩ and MODE B of Pin ⑫ signals select the sircs code discriminated by UL1. Single, second and remote 2 modes are selected when (MODE A: high, MODE B: low), (MODE A: low, MODE B: high), (MODE A: high, MODE B: high), respectively.

CN9 is connected to REMOTE 2 terminal. When B1 to B8 is grounded, signal input to CN9 is selected by UL7, passes it through UA4 and then lowers the prescribed signal among $\overline{\text{SEL1}}$ to $\overline{\text{SEL8}}$ output from UL1. In this case, UL6 generates the pulse every time selecting the channel and closes switches ⑧ and ⑨ of UA3, allowing to output the code, indicating that the channel is selected in the remote 2 mode, from Pin ㉙ of UL2. SEL1 to SEL8 (Pins ⑭ to ㉑ of CN9) is used for indicating the selected channel (1 to 8). When the channel is selected, corresponding signal becomes high. The power on/off signals become high according to PC-1270 on/off (standby) states, respectively. $\overline{\text{SELECT}}$ (Pin ㉒ of CN9) signal becomes low when the signal among 1 to 8 is selected.

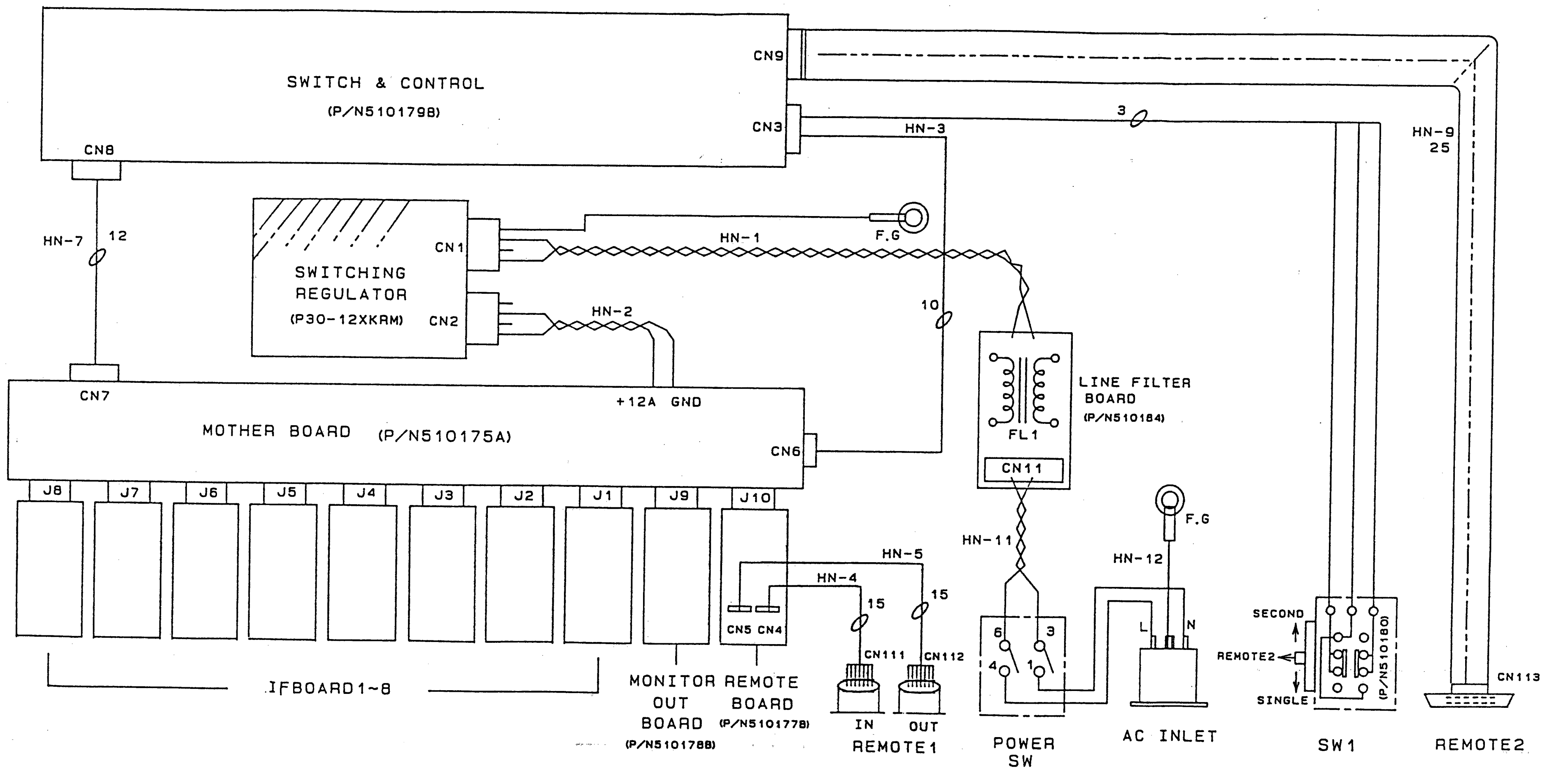
CN8 outputs the control signal for selecting a interface board and turning the power on/off. Each $\overline{\text{SEL1}}$ to $\overline{\text{SEL8}}$ (Pins ① to ⑨ of CN8) is used for indicating the selected channel (1 to 8). When the channel is selected, corresponding signal becomes low. $\overline{\text{POWER}}$ (Pin ⑪ of CN8) signal is low when power on, and $\overline{\text{SELECT}}$ (Pin ⑨ of CN8) signal becomes low when the signal among 1 to 8 is selected. $\overline{\text{SEL}}$ (Pin ⑩ of CN8) signal detects the channel selecting and generates the pulse every time switching the channel.

3. Sircs Signal

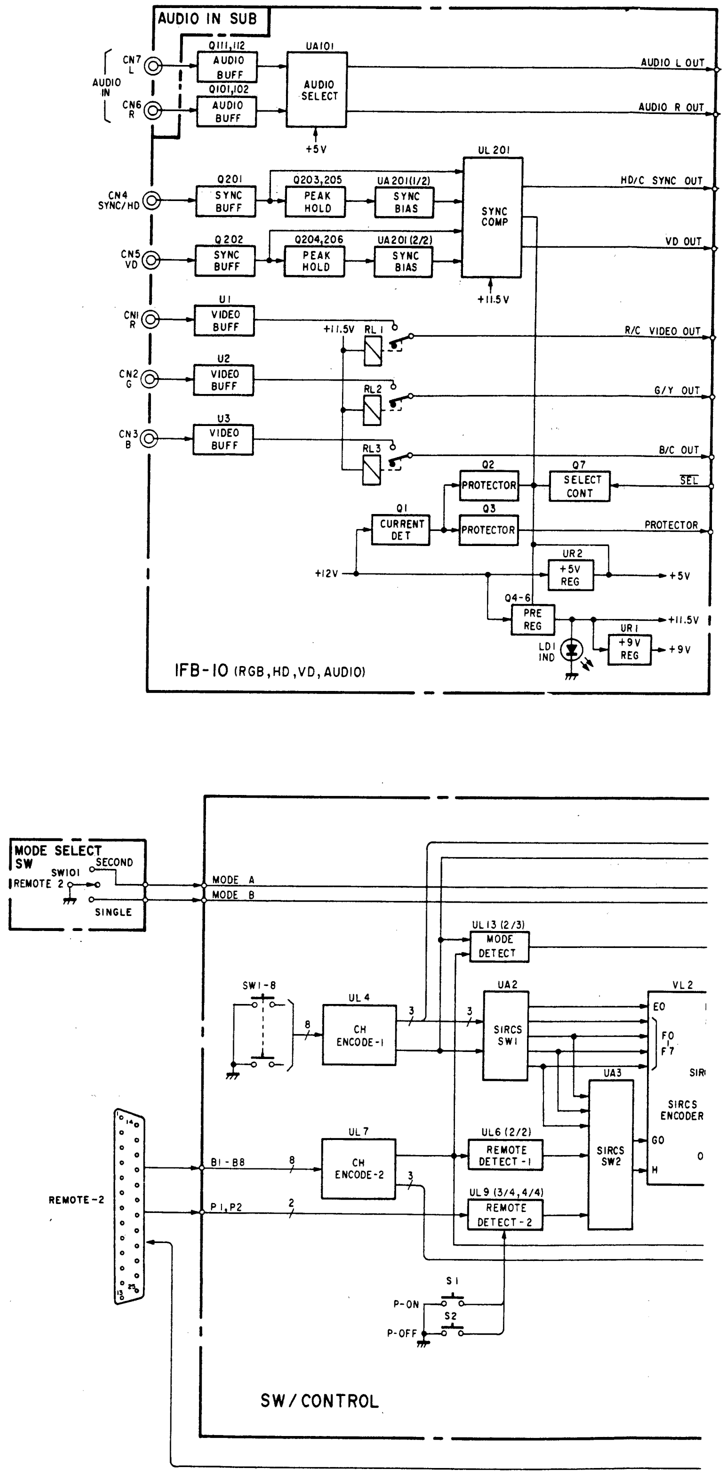
U1 is the infrared ray receiver that receives infrared rays from the remote commander, and that outputs the prescribed code from Pin ② . U1 output passes through the buffer and is output from Pin ⑤ of CN3. The signal from the control S IN or the infrared ray receiving block is input from Pin ③ of CN3. The input signal from Pin ⑮ of CN3 is input to Pin ④ of UL11 and pass through the OR-gate together with the signal from Pin ㉙ of UL2. And the resulting signal is output from Pin ⑥ of UL15 and then is input to the OR-gate (Pin ② of UL9) together with the input signal from REMOTE 2 terminal. The resulting signal is input to Pin ㉓ of UL1. And the same signal is also passed through UL11 and Q1, and then output from Pin ① of CN3.

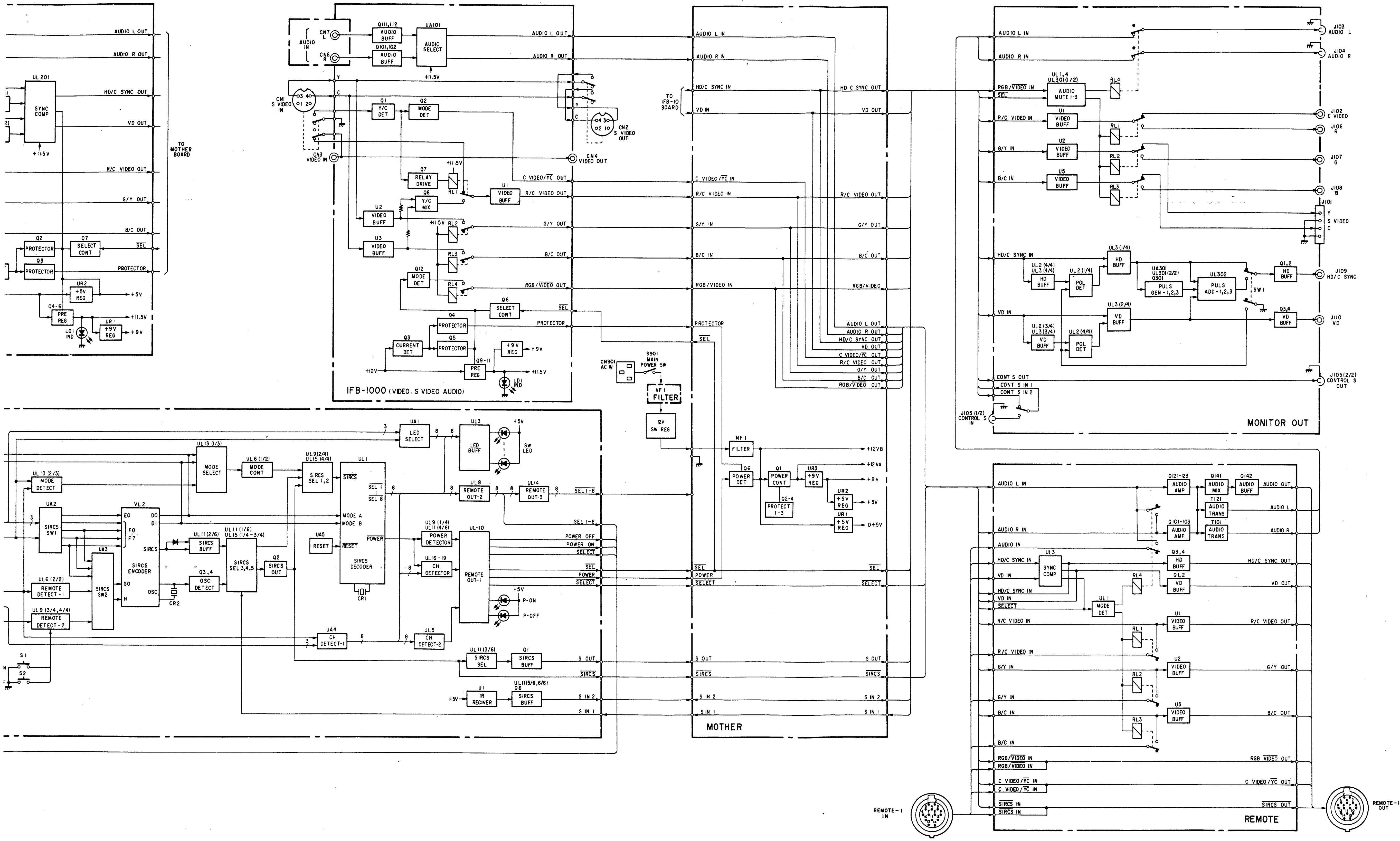
SECTION 4
DIAGRAMS

4-1. CONNECTION

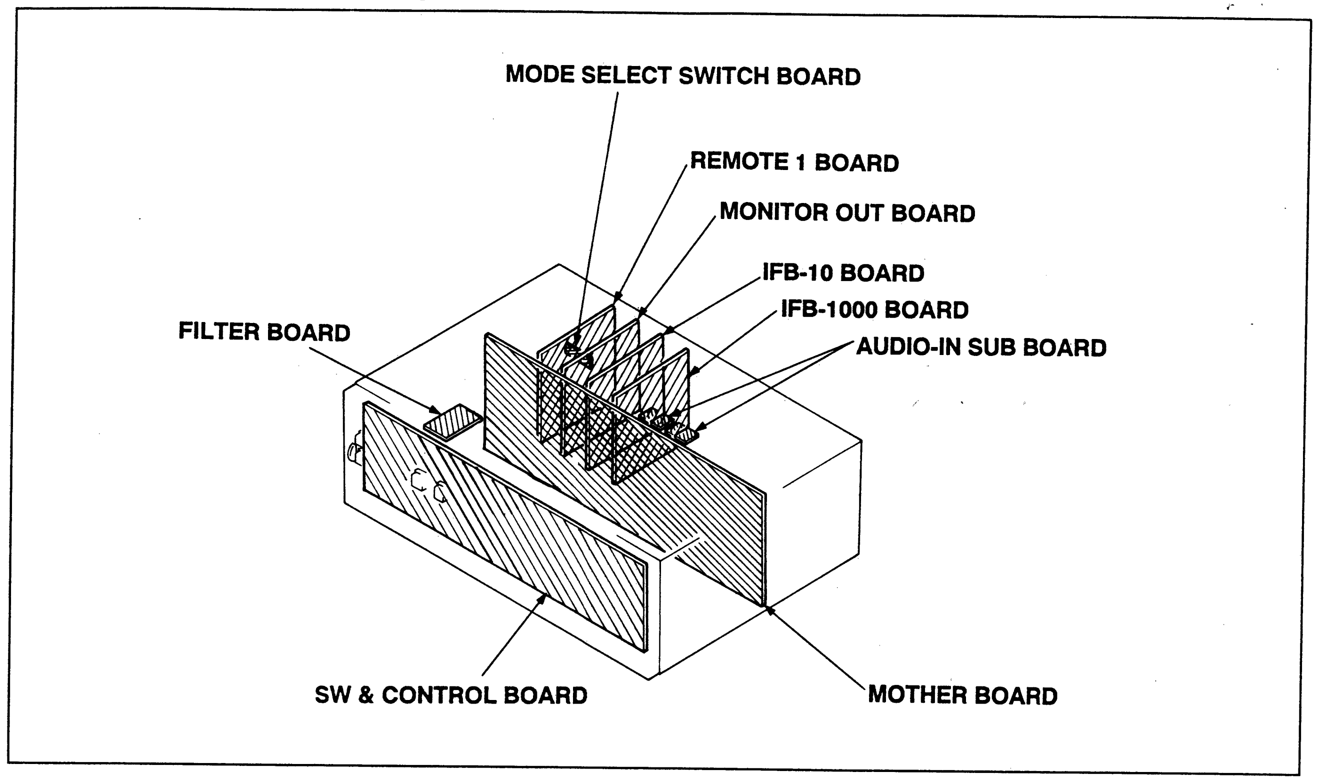

SWITCH & CONTROL
(P/N510179B)
CN8
CN9
CN3
HN-3
3
HN-9
25
HN-7
12
SWITCHING
REGULATOR
(P30-12XKRM)
CN1
CN2
HN-1
F.G
HN-2
10
LINE FILTER
BOARD
(P/N510184)
FL1
CN11
+12A GND
CN7
MOTHER BOARD (P/N510175A)
CN6
J8
J7
J6
J5
J4
J3
J2
J1
J9
J10
HN-5
HN-4
15
15
CN5 CN4
CN111
CN112
HN-11
HN-12
F.G
6
3
4
1
L
N
SECOND
REMOTE2
SINGLE
(P/N510180)
CN113
IFBOARD1~8
MONITOR
OUT
BOARD
(P/N510178B)
REMOTE
BOARD
(P/N510177B)
IN
OUT
REMOTE1
POWER
SW
AC INLET
SW1
REMOTE2

4-2. BLOCK DIAGRAM


AUDIO IN SUB
AUDIO IN
CN7 L
CN6 R
Q111,112
AUDIO BUFF
Q101,102
AUDIO BUFF
UA101
AUDIO SELECT
+5V
AUDIO L OUT
AUDIO R OUT
CN4 SYNC/HD
CN5 VD
Q201
SYNC BUFF
Q202
SYNC BUFF
Q203,205
PEAK HOLD
Q204,206
PEAK HOLD
UA201(1/2)
SYNC BIAS
UA201(2/2)
SYNC BIAS
UL201
SYNC COMP
+11.5V
HD/C SYNC OUT
VD OUT
CN1 R
CN2 G
CN3 B
U1
VIDEO BUFF
U2
VIDEO BUFF
U3
VIDEO BUFF
+11.5V
RL1
RL2
RL3
R/C VIDEO OUT
G/Y OUT
B/C OUT
Q2
PROTECTOR
Q7
SELECT CONT
SEL
Q1
CURRENT DET
Q3
PROTECTOR
PROTECTOR
+12V
UR2
+5V REG
+5V
Q4-6
PRE REG
+11.5V
LD1
IND
UR1
+9V REG
+9V
IFB-10 (RGB,HD,VD,AUDIO)
MODE SELECT SW
SW101
REMOTE 2
SECOND
SINGLE
MODE A
MODE B
SW1-8
8
UL4
CH ENCODE-1
3
3
UL13 (2/3)
MODE DETECT
UA2
SIRCS SW1
VL2
E0
F0
F7
SIRCS ENCODER
UA3
SIRCS SW2
G0
H
REMOTE-2
B1-B8
8
P1,P2
2
UL7
CH ENCODE-2
3
UL6 (2/2)
REMOTE DETECT-1
UL9 (3/4,4/4)
REMOTE DETECT-2
S1
P-ON
S2
P-OFF
SW/CONTROL


AUDIO L OUT
AUDIO R OUT
UL 201
SYNC COMP
HD/C SYNC OUT
VD OUT
+11.5V
TO MOTHER BOARD
R/C VIDEO OUT
G/Y OUT
B/C OUT
Q2 PROTECTOR
Q3 PROTECTOR
Q7 SELECT CONT
SEL
PROTECTOR
UR2 +5V REG
Q4-6 PRE REG
UR1 +9V REG
LD1 IND
+5V
+11.5V
+9V
CN7 L
CN6 R
AUDIO IN
Q111,112 AUDIO BUFF
Q101,102 AUDIO BUFF
UA101 AUDIO SELECT
+11.5V
CN1 S VIDEO IN
CN3 VIDEO IN
Q1 Y/C DET
Q2 MODE DET
CN2 S VIDEO OUT
CN4 VIDEO OUT
Q7 RELAY DRIVE
Q8 Y/C MIX
RL1
U1 VIDEO BUFF
U2 VIDEO BUFF
U3 VIDEO BUFF
RL2
RL3
RL4
Q12 MODE DET
Q6 SELECT CONT
Q4 PROTECTOR
Q5 PROTECTOR
Q3 CURRENT DET
Q9-11 PRE REG
+9V REG
+12V
C VIDEO/Y͞C OUT
R/C VIDEO OUT
G/Y OUT
B/C OUT
RGB/V͞I͞D͞E͞O OUT
IFB-1000 (VIDEO, S VIDEO AUDIO)
TO IFB-10 BOARD
AUDIO L IN
AUDIO R IN
HD/C SYNC IN
VD IN
C VIDEO/Y͞C IN
R/C VIDEO IN
G/Y IN
B/C IN
RGB/VIDEO IN
PROTECTOR
S͞E͞L
HD C SYNC OUT
VD OUT
RGB/VIDEO
AUDIO L OUT
AUDIO R OUT
HD/C SYNC OUT
CN901 AC IN
S901 MAIN POWER SW
NF1 FILTER
12V SW REG
NF1 FILTER
Q6 POWER DET
Q1 POWER CONT
Q2-4 PROTECT 1-3
UR3 +9V REG
UR2 +5V REG
UR1 +5V REG
+12VB
+12VA
+9V
+5V
D+5V
UA1 LED SELECT
UL3 LED BUFF
SW LED
UL13 (1/3) MODE SELECT
UL6 (1/2) MODE CONT
UL13 (2/3) MODE DETECT
UL9 (2/4) UL15 (4/4) SIRCS SEL 1,2
UL1 S͞I͞R͞C͞S SEL 1~SEL 8 MODE A MODE B RESET POWER SIRCS DECODER
CR1
UL8 REMOTE OUT-2
UL14 REMOTE OUT-3
SEL 1-8
UA2 SIRCS SW1
VL2 EO DO D1 F0~F7 SIRCS ENCODER GO OSC H
UA3 SIRCS SW2
UL11 (2/6) SIRCS BUFF
UL11 (1/6) UL15 (1/4-3/4) SIRCS SEL 3,4,5
Q2 SIRCS OUT
Q3,4 OSC DETECT
CR2
UA5 RESET
UL6 (2/2) REMOTE DETECT-1
UL9 (3/4,4/4) REMOTE DETECT-2
UL9 (1/4) UL11 (4/6) POWER DETECTOR
UL16-19 CH DETECTOR
UL-10 REMOTE OUT-1
POWER OFF
POWER ON
SELECT
POWER
P-ON
P-OFF
UA4 CH DETECT-1
UL5 CH DETECT-2
S1
S2
UL11 (3/6) SIRCS SEL
Q1 SIRCS BUFF
U1 IR RECIVER
UL11(5/6,6/6) Q6 SIRCS BUFF
S OUT
S͞I͞R͞C͞S
S IN 2
S IN 1
MOTHER
J103 AUDIO L
J104 AUDIO R
UL1,4 UL301(1/2) AUDIO MUTE 1-3
RGB/V͞I͞D͞E͞O IN
R/C VIDEO IN
U1 VIDEO BUFF
U2 VIDEO BUFF
U5 VIDEO BUFF
J102 C VIDEO
J106 R
J107 G
J108 B
J101 Y S VIDEO C
HD/C SYNC IN
UL2 (4/4) UL3 (4/4) HD BUFF
UL2 (1/4) POL DET
UL3 (1/4) HD BUFF
UA301 UL301(2/2) Q301 PULS GEN-1,2,3
UL302 PULS ADD-1,2,3
SW1
Q1,2 HD BUFF
J109 HD/C SYNC
UL3 (2/4) VD BUFF
UL2 (3/4) UL3 (3/4) VD BUFF
UL2 (4/4) POL DET
Q3,4 VD BUFF
J110 VD
CONT S OUT
CONT S IN 1
CONT S IN 2
J105 (2/2) CONTROL S OUT
J105 (1/2) CONTROL S IN
MONITOR OUT
Q121-123 AUDIO AMP
Q141 AUDIO MIX
Q142 AUDIO BUFF
T121 AUDIO TRANS
Q161-163 AUDIO AMP
T101 AUDIO TRANS
AUDIO OUT
AUDIO L
AUDIO R
AUDIO IN
UL3 SYNC COMP
Q3,4 HD BUFF
Q1,2 VD BUFF
UL1 MODE DET
SELECT
HD/C SYNC OUT
VD OUT
R/C VIDEO OUT
G/Y OUT
B/C OUT
RGB V͞I͞D͞E͞O OUT
C VIDEO/Y͞C IN
C VIDEO/Y͞C OUT
S͞I͞R͞C͞S IN
S͞I͞R͞C͞S OUT
REMOTE-1 IN
REMOTE-1 OUT
REMOTE

4-3. CIRCUIT BOARDS LOCATION


MODE SELECT SWITCH BOARD
REMOTE 1 BOARD
MONITOR OUT BOARD
IFB-10 BOARD
IFB-1000 BOARD
AUDIO-IN SUB BOARD
FILTER BOARD
SW & CONTROL BOARD
MOTHER BOARD

4-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS
— Conductor Side —

Note: The components identified by shading and mark ⚠ are critical for safty. Replace only with part number specified.

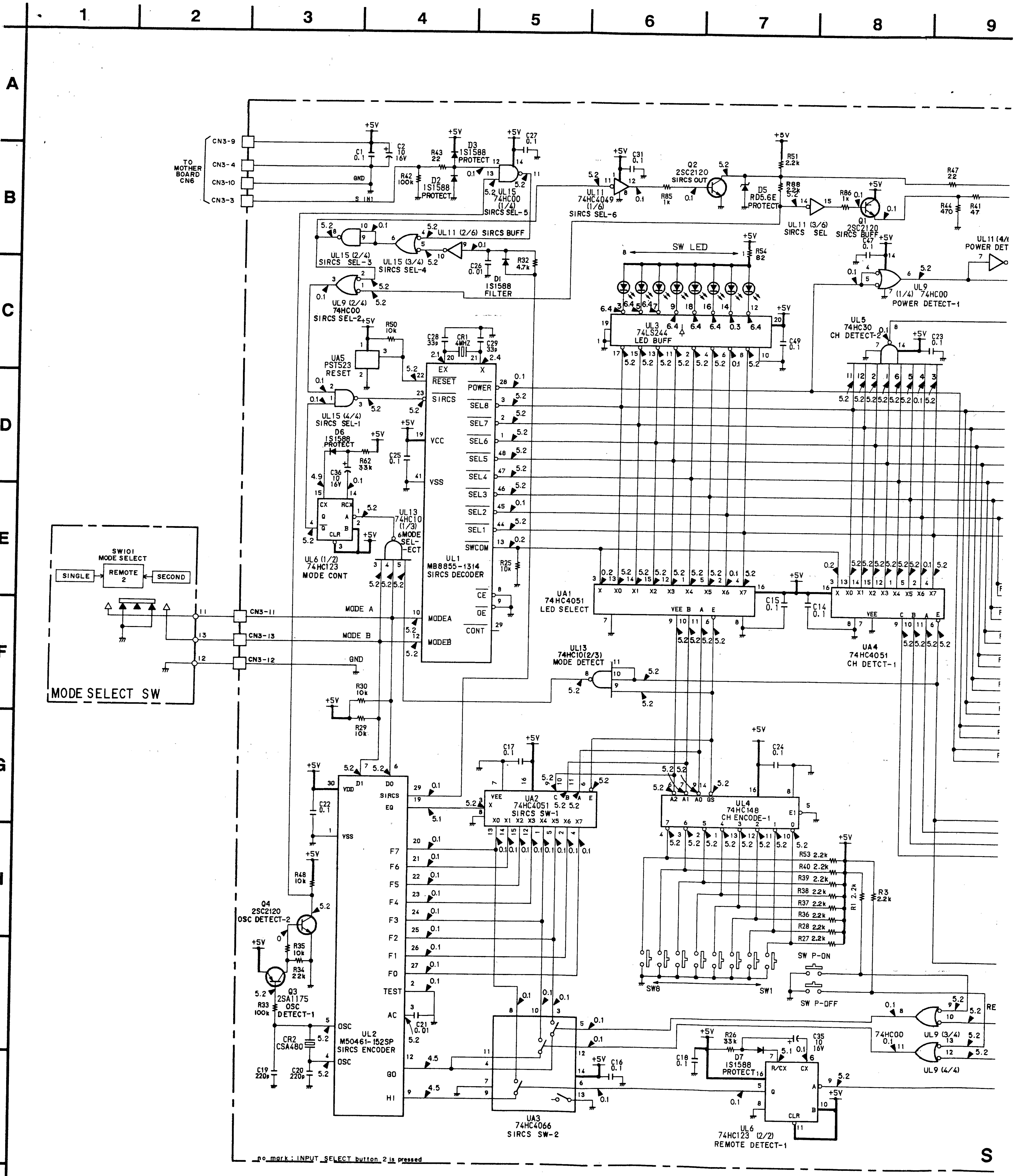
Note:

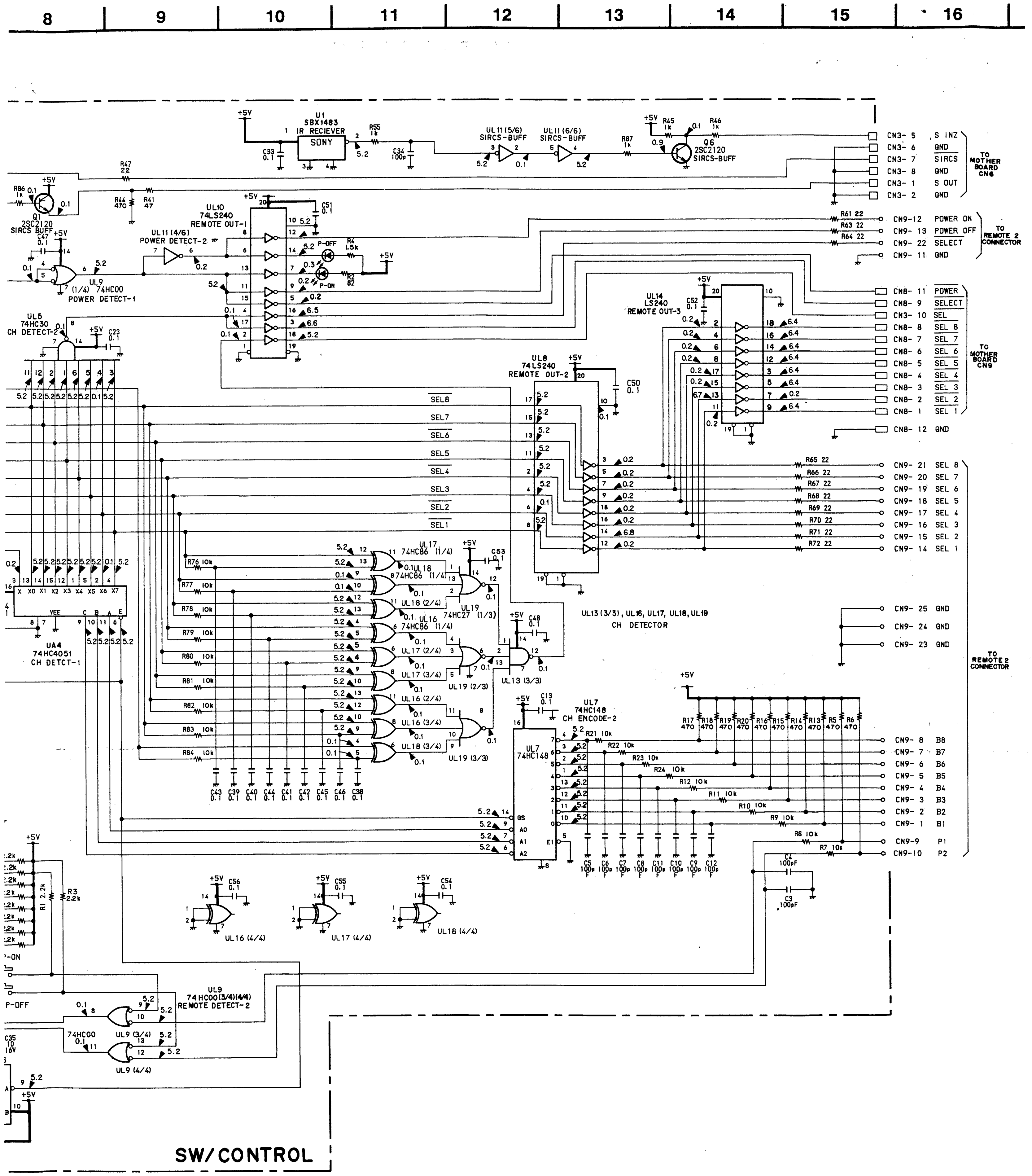
- All capacitors are in μF unless otherwise noted. p: $\mu\mu$F
  50 WV or less are not indicated except for electrolytic and tantalums.
  All electrolytics are in 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ =1000Ω , MΩ =1000KΩ
- Indication of resistance, which does not have one for rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power: 1/4W

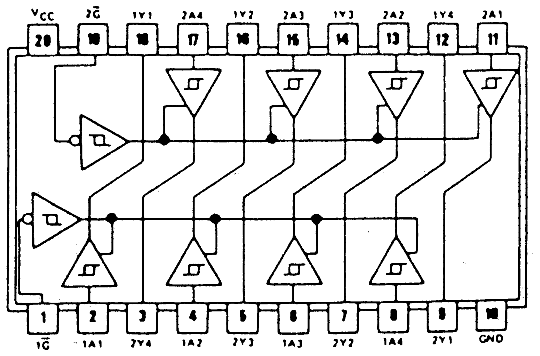
- ▭ : nonflamable resistor.
- ▭ : panel designation.

- Readings are taken with a color-bar signal input.
- Readings are taken with a 10 MΩ digital maltimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be neted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- V : B+ bus.

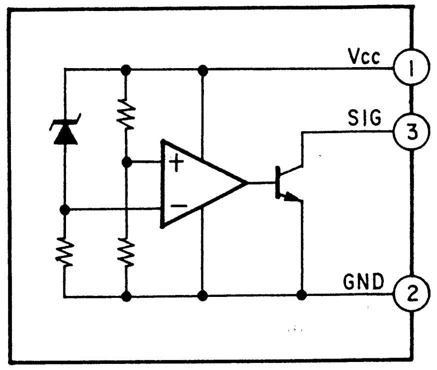

1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
TO MOTHER BOARD CN6
CN3-9
CN3-4
CN3-10
CN3-3
D3 1S1588 PROTECT
D2 1S1588 PROTECT
UL15 74HC00 (1/4) SIRCS SEL-5
UL11 74HC4049 (1/6) SIRCS SEL-6
Q2 2SC2120 SIRCS OUT
D5 RD5.6E PROTECT
UL11 (3/6) SIRCS SEL
Q1 2SC2120 SIRCS BUFF
UL11 (4/6) POWER DET
UL11 (2/6) SIRCS BUFF
UL15 (2/4) SIRCS SEL-3
UL15 (3/4) SIRCS SEL-4
D1 1S1588 FILTER
SW LED
UL3 74LS244 LED BUFF
UL9 (1/4) 74HC00 POWER DETECT-1
UL9 (2/4) 74HC00 SIRCS SEL-2
UL5 74HC30 CH DETECT-2
UA5 PST523 RESET
UL15 (4/4) SIRCS SEL-1
D6 1S1588 PROTECT
UL6 (1/2) 74HC123 MODE CONT
UL13 74HC10 (1/3) MODE SELECT
UL1 MB8855-1314 SIRCS DECODER
SW101 MODE SELECT
SINGLE
REMOTE 2
SECOND
MODE SELECT SW
CN3-11
CN3-13
CN3-12
MODE A
MODE B
GND
UA1 74HC4051 LED SELECT
UA4 74HC4051 CH DETCT-1
UL13 74HC10 (2/3) MODE DETECT
UA2 74HC4051 SIRCS SW-1
UL4 74HC148 CH ENCODE-1
Q4 2SC2120 OSC DETECT-2
Q3 2SA1175 OSC DETECT-1
CR2 CSA480
UL2 M50461-152SP SIRCS ENCODER
UA3 74HC4066 SIRCS SW-2
SW8
SW1
SW P-ON
SW P-OFF
D7 1S1588 PROTECT
UL6 74HC123 (2/2) REMOTE DETECT-1
UL9 (3/4) 74HC00
UL9 (4/4)
no mark : INPUT SELECT button 2 is pressed
S


8
9
10
11
12
13
14
15
16
U1 SBX1483 IR RECIEVER SONY
UL11 (5/6) SIRCS-BUFF
UL11 (6/6) SIRCS-BUFF
Q6 2SC2120 SIRCS-BUFF
Q1 2SC2120 SIRCS BUFF
UL10 74LS240 REMOTE OUT-1
UL11 (4/6) POWER DETECT-2
UL9 (1/4) 74HC00 POWER DETECT-1
P-OFF
P-ON
UL5 74HC30 CH DETECT-2
UL14 LS240 REMOTE OUT-3
UL8 74LS240 REMOTE OUT-2
UA4 74HC4051 CH DETCT-1
UL17 74HC86 (1/4)
UL18 74HC86 (1/4)
UL16 74HC86 (1/4)
UL19 74HC27 (1/3)
UL13 (3/3)
UL13 (3/3), UL16, UL17, UL18, UL19 CH DETECTOR
UL7 74HC148 CH ENCODE-2
UL16 (4/4)
UL17 (4/4)
UL18 (4/4)
UL9 74HC00(3/4)(4/4) REMOTE DETECT-2
CN3- 5 S INZ
CN3- 6 GND
CN3- 7 SIRCS
CN3- 8 GND
CN3- 1 S OUT
CN3- 2 GND
TO MOTHER BOARD CN6
CN9-12 POWER ON
CN9- 13 POWER OFF
CN9- 22 SELECT
CN9- 11 GND
TO REMOTE 2 CONNECTOR
CN8- 11 POWER
CN8- 9 SELECT
CN3- 10 SEL
CN8- 8 SEL 8
CN8- 7 SEL 7
CN8- 6 SEL 6
CN8- 5 SEL 5
CN8- 4 SEL 4
CN8- 3 SEL 3
CN8- 2 SEL 2
CN8- 1 SEL 1
CN8- 12 GND
TO MOTHER BOARD CN9
SEL8
SEL7
SEL6
SEL5
SEL4
SEL3
SEL2
SEL1
CN9- 21 SEL 8
CN9- 20 SEL 7
CN9- 19 SEL 6
CN9- 18 SEL 5
CN9- 17 SEL 4
CN9- 16 SEL 3
CN9- 15 SEL 2
CN9- 14 SEL 1
CN9- 25 GND
CN9- 24 GND
CN9- 23 GND
TO REMOTE 2 CONNECTOR
CN9- 8 B8
CN9- 7 B7
CN9- 6 B6
CN9- 5 B5
CN9- 4 B4
CN9- 3 B3
CN9- 2 B2
CN9- 1 B1
CN9-9 P1
CN9-10 P2
SW/CONTROL

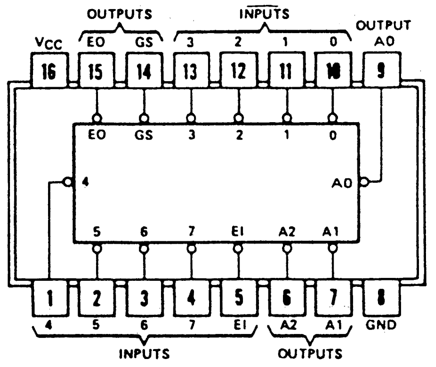
74LS244


Vcc
2G
1Y1
2A4
1Y2
2A3
1Y3
2A2
1Y4
2A1
1G
1A1
2Y4
1A2
2Y3
1A3
2Y2
1A4
2Y1
GND

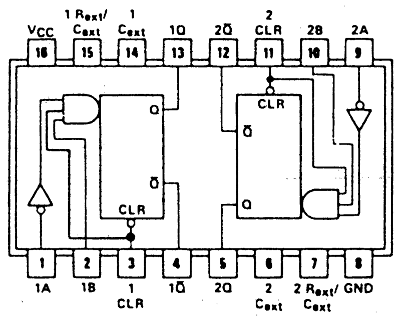
UL4 PST523



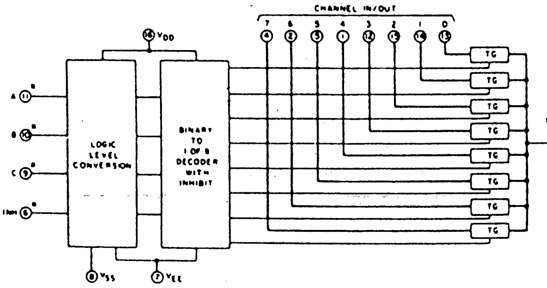
HD74HC148


OUTPUTS
INPUTS
OUTPUT
Vcc
EO
GS
3
2
1
0
A0
4
5
6
7
EI
A2
A1
GND
INPUTS
OUTPUTS

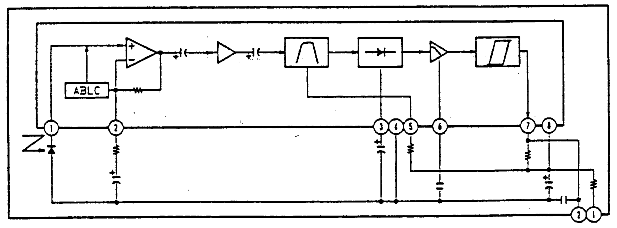
HD74HC123


Vcc
1 Rext/Cext
1 Cext
1Q
2Q
2 CLR
2B
2A
1A
1B
1 CLR
1Q
2Q
2 Cext
2 Rext/Cext
GND
CLR

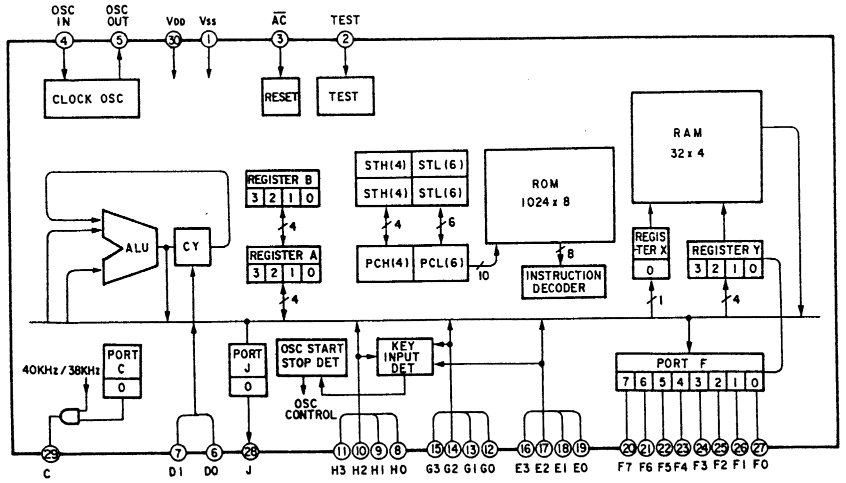
74HC4051


CHANNEL IN/OUT
VDD
LOGIC LEVEL CONVERSION
BINARY TO 1 OF 8 DECODER WITH INHIBIT
COMMON OUT/IN
VSS
VEE

SBX1483-1

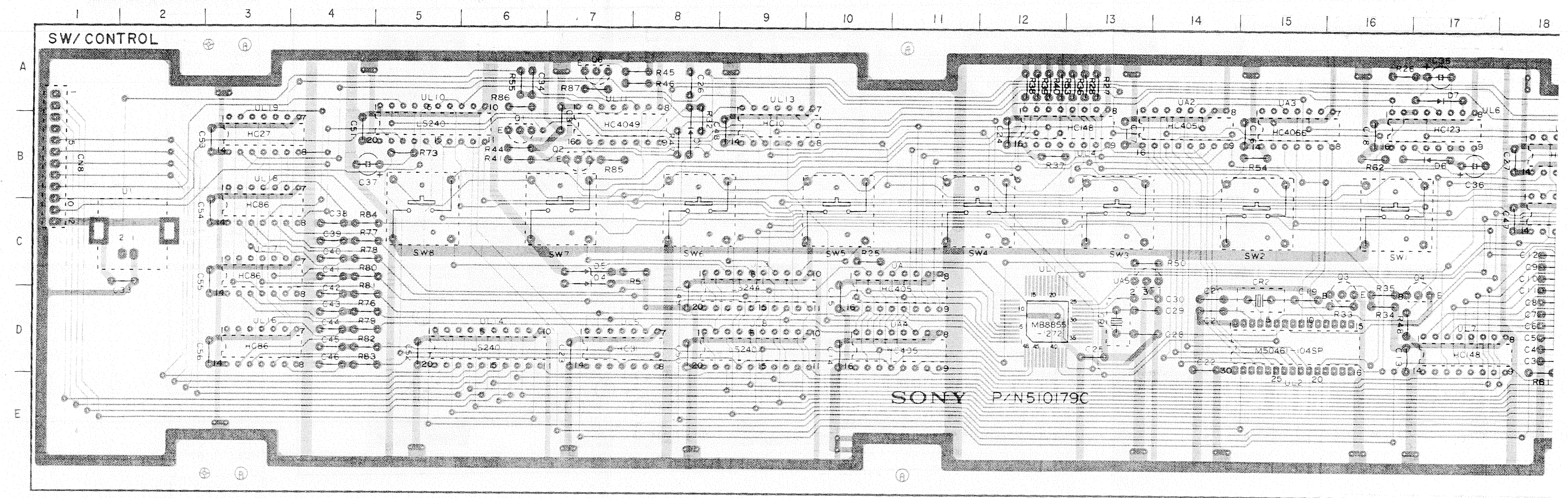


UL2 M50461-152SP

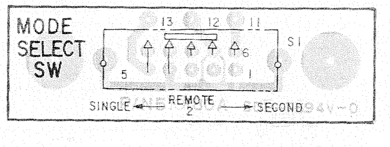

OSC IN
OSC OUT
VDD
VSS
AC
TEST
CLOCK OSC
RESET
TEST
RAM 32 x 4
REGISTER B
REGISTER A
STH(4)
STL(6)
PCH(4)
PCL(6)
ROM 1024 x 8
INSTRUCTION DECODER
REGISTER X
REGISTER Y
ALU
CY
PORT C
PORT J
OSC START STOP DET
KEY INPUT DET
OSC CONTROL
PORT F
40KHz/38KHz
C
D1
D0
J
H3 H2 H1 H0
G3 G2 G1 G0
E3 E2 E1 E0
F7 F6 F5 F4 F3 F2 F1 F0

SW & CONTROL | MODE SELECT SW

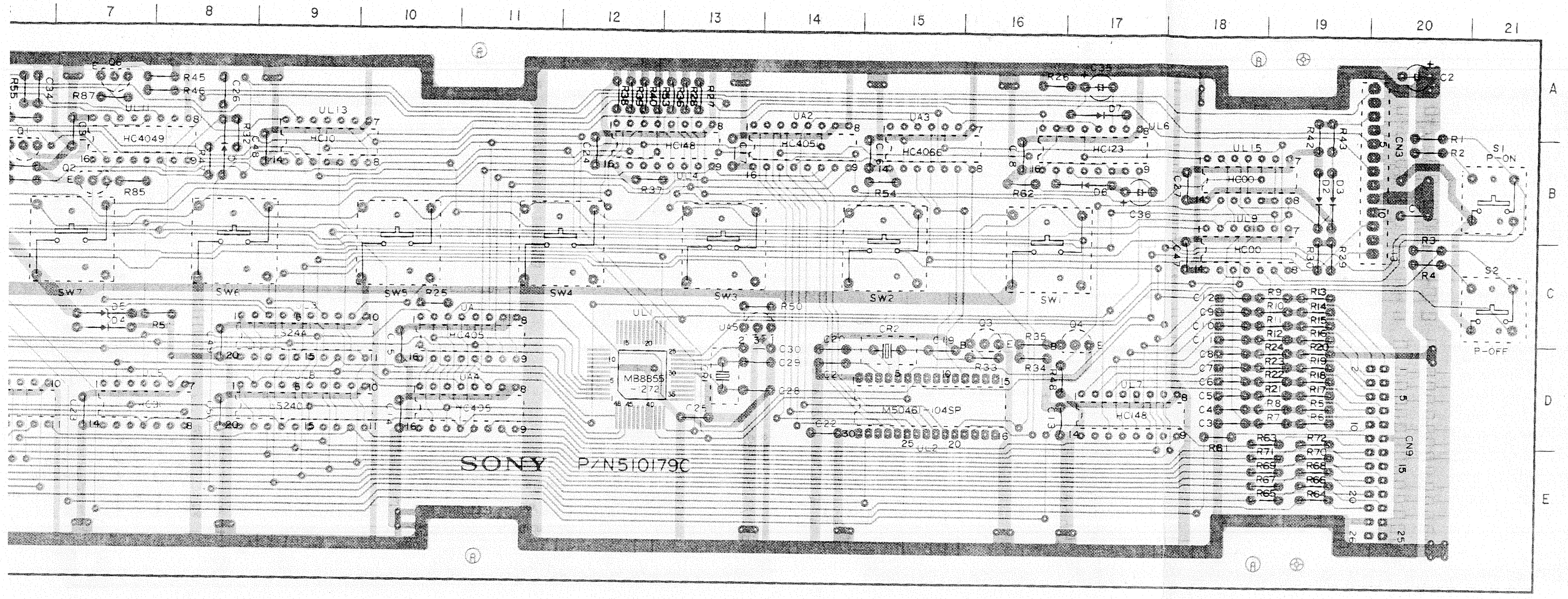
— SW & CONTROL Board —


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
A
B
C
D
E
SW/CONTROL
CN8
UL1
UL19
HC27
UL16
HC86
UL10
LS240
UL11
HC4049
UL13
HC10
UA2
HC148
HC4051
UA3
HC4066
UL6
HC123
SW8
SW7
SW6
SW5
SW4
SW3
SW2
SW1
UL1
MB8855
UL2
M50461-104SP
HC148
UA1
HC405
UA4
LS244
LS240
SONY
P/N5101790

— MODE SELECT SW Board —


MODE
SELECT
SW
13
12
11
S1
6
5
1
SINGLE
REMOTE
2
SECOND

SW

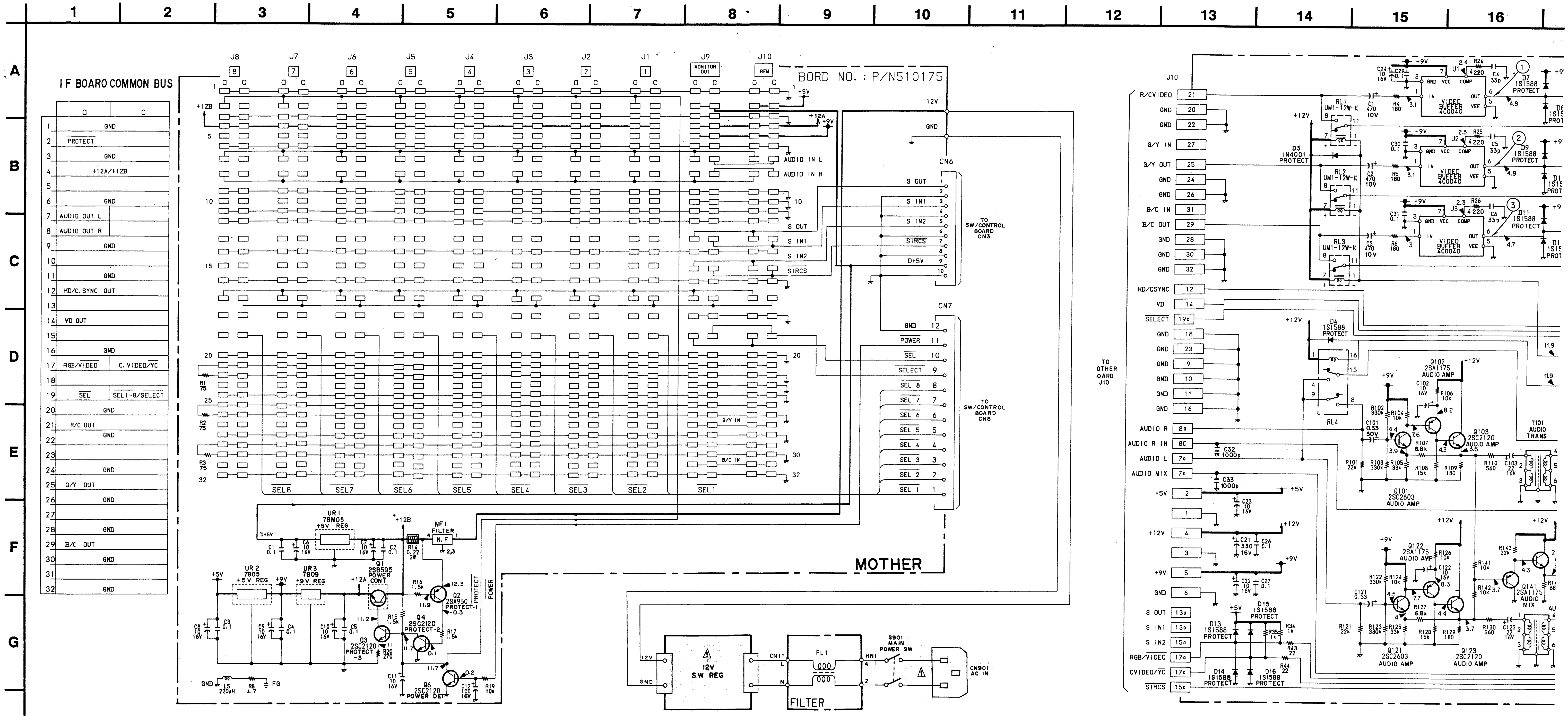

7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
A
B
C
D
E
SW7
SW6
SW5
SW4
SW3
SW2
SW1
S1
P-ON
S2
P-OFF
R45
R46
R87
R55
C34
C26
UL11
UL13
HC4049
HC10
Q1
Q2
R85
UA2
UA3
HC148
HC405
HC4066
HC123
UL6
UL15
HC00
UL9
CN3
CN9
R1
R2
R3
R4
C2
D7
D6
D2
D3
R42
R43
C36
R54
R62
R37
R25
UA1
HC405
UA4
HC405
LS244
LS240
UL1
MB8855
-272
UA5
CR2
Q3
Q4
R35
R33
R34
M5046
M5046I-104SP
UL2
UL7
HC148
C25
C29
C30
C28
C22
R50
R5
SONY
P/N510179C

SW & CONTROL BOARD

IC	
U1	C-2
UA1	C-11
UA2	B-14
UA3	B-15
UA4	D-11
UA5	C-13
UL1	D-12
UL2	D-15
UL3	C-9
UL4	B-13
UL5	D-7
UL6	A-17
UL7	D-17
UL8	D-9
UL9	C-18
UL10	B-5
UL11	B-7
UL13	B-9
UL14	D-6
UL15	B-18
UL16	D-3
UL17	C-3
UL18	B-3
UL19	B-3

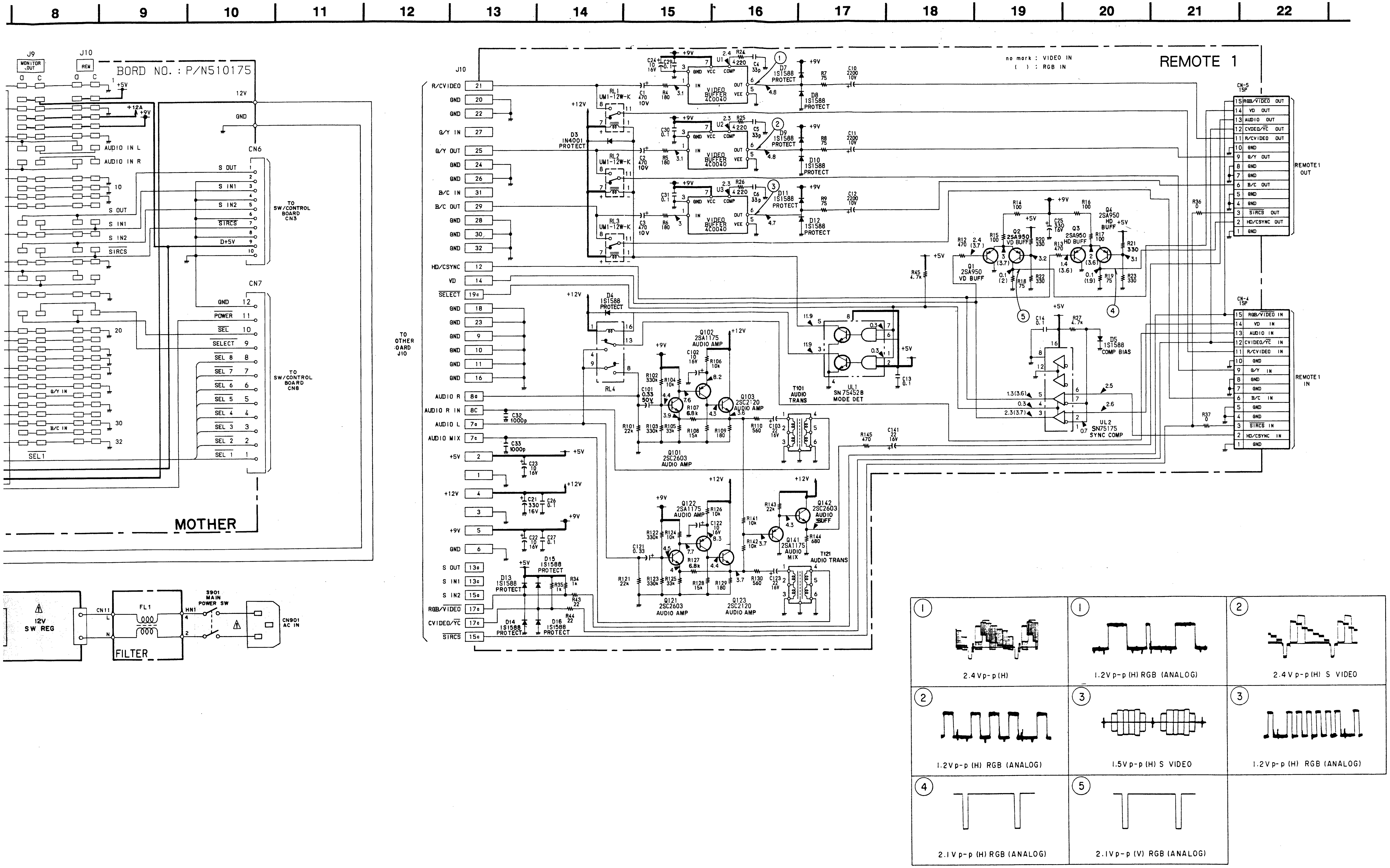
TRANSISTOR	
Q1	B-6
Q2	B-7
Q3	C-16
Q4	C-17
Q6	A-7

DIODE	
D1	B-8
D2	B-19
D3	B-19
D5	C-7
D6	B-17
D7	A-17


BORD NO. : P/N510175
J8
J7
J6
J5
J4
J3
J2
J1
J9
MONITOR OUT
J10
REM
+5V
+12A
+9V
+12B
AUDIO IN L
AUDIO IN R
S OUT
S IN1
S IN2
SIRCS
G/Y IN
B/C IN
SEL8
SEL7
SEL6
SEL5
SEL4
SEL3
SEL2
SEL1
12V
GND
CN6
TO SW/CONTROL BOARD CN3
D+5V
CN7
POWER
SEL
SELECT
TO SW/CONTROL BOARD CN8
MOTHER
UR1 78M05 +5V REG
UR2 7805 +5V REG
UR3 7809 +9V REG
NF1 FILTER
Q1 2SB595 POWER CONT
Q2 2SA950 PROTECT-1
Q4 2SC2120 PROTECT-2
Q3 2SC2120 PROTECT-3
Q6 2SC2120 POWER DET
PROTECT
POWER
FG
12V SW REG
CN11
FL1
FILTER
HN1
S901 MAIN POWER SW
CN901 AC IN
TO OTHER BOARD J10
R/CVIDEO
G/Y IN
G/Y OUT
B/C IN
B/C OUT
HD/CSYNC
VD
SELECT
AUDIO R
AUDIO R IN
AUDIO L
AUDIO MIX
S OUT
S IN1
S IN2
RGB/VIDEO
CVIDEO/YC
SIRCS
D3 1N4001 PROTECT
RL1 UM1-12W-K
RL2 UM1-12W-K
RL3 UM1-12W-K
U1 VIDEO BUFFER 4C0040
U2 VIDEO BUFFER 4C0040
U3 VIDEO BUFFER 4C0040
D7 1S1588 PROTECT
D9 1S1588 PROTECT
D11 1S1588 PROTECT
D4 1S1588 PROTECT
RL4
Q101 2SC2603 AUDIO AMP
Q102 2SA1175 AUDIO AMP
Q103 2SC2120 AUDIO AMP
T101 AUDIO TRANS
Q121 2SC2603 AUDIO AMP
Q122 2SA1175 AUDIO AMP
Q123 2SC2120 AUDIO AMP
Q141 2SA1175 AUDIO MIX
D13 1S1588 PROTECT
D14 1S1588 PROTECT
D15 1S1588 PROTECT
D16 1S1588 PROTECT

IF BOARO COMMON BUS

	a	c
1	GND	
2	PROTECT	
3	GND	
4	+12A/+12B	
5		
6	GND	
7	AUDIO OUT L	
8	AUDIO OUT R	
9	GND	
10		
11	GND	
12	HD/C.SYNC OUT	
13		
14	VD OUT	
15		
16	GND	
17	RGB/VIDEO	C.VIDEO/YC
18		
19	SEL	SEL1-8/SELECT
20	GND	
21	R/C OUT	
22	GND	
23		
24	GND	
25	G/Y OUT	
26	GND	
27		
28	GND	
29	B/C OUT	
30	GND	
31		
32	GND	


8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
J9
MONITOR OUT
J10
REM
BORD NO. : P/N510175
12V
GND
+12A
+9V
+5V
AUDIO IN L
AUDIO IN R
S OUT
S IN1
S IN2
SIRCS
G/Y IN
B/C IN
SEL1
CN6
S OUT
S IN1
S IN2
SIRCS
D+5V
TO SW/CONTROL BOARD CN3
CN7
GND
POWER
SEL
SELECT
SEL 8
SEL 7
SEL 6
SEL 5
SEL 4
SEL 3
SEL 2
SEL 1
TO SW/CONTROL BOARD CN8
MOTHER
12V SW REG
CN11
FL1
FILTER
HN1
S901 MAIN POWER SW
CN901 AC IN
TO OTHER BOARD J10
J10
R/CVIDEO
GND
G/Y IN
G/Y OUT
B/C IN
B/C OUT
HD/CSYNC
VD
SELECT
AUDIO R
AUDIO R IN
AUDIO L
AUDIO MIX
+5V
+12V
+9V
S OUT
S IN1
S IN2
RGB/VIDEO
CVIDEO/YC
SIRCS
RL1 UM1-12W-K
RL2 UM1-12W-K
RL3 UM1-12W-K
RL4
D3 1N4001 PROTECT
U1 VIDEO BUFFER 4C0040
U2 VIDEO BUFFER 4C0040
U3 VIDEO BUFFER 4C0040
D7 1S1588 PROTECT
D8 1S1588 PROTECT
D9 1S1588 PROTECT
D10 1S1588 PROTECT
D11 1S1588 PROTECT
D12 1S1588 PROTECT
D4 1S1588 PROTECT
Q102 2SA1175 AUDIO AMP
Q103 2SC2120 AUDIO AMP
Q101 2SC2603 AUDIO AMP
T101 AUDIO TRANS
UL1 SN75452B MODE DET
Q122 2SA1175 AUDIO AMP
Q121 2SC2603 AUDIO AMP
Q123 2SC2120 AUDIO AMP
Q142 2SC2603 AUDIO BUFF
Q141 2SA1175 AUDIO MIX
T121 AUDIO TRANS
D13 1S1588 PROTECT
D14 1S1588 PROTECT
D15 1S1588 PROTECT
D16 1S1588 PROTECT
no mark : VIDEO IN
( ) : RGB IN
REMOTE 1
Q1 2SA950 VD BUFF
Q2 2SA950 VD BUFF
Q3 2SA950 HD BUFF
Q4 2SA950 HD BUFF
D5 1S1588 COMP BIAS
UL2 SN75175 SYNC COMP
CN-5 15P
RGB/VIDEO OUT
VD OUT
AUDIO OUT
CVIDEO/YC OUT
R/CVIDEO OUT
GND
G/Y OUT
B/C OUT
SIRCS OUT
HD/CSYNC OUT
REMOTE1 OUT
CN-4 15P
RGB/VIDEO IN
VD IN
AUDIO IN
CVIDEO/YC IN
R/CVIDEO IN
G/Y IN
B/C IN
SIRCS IN
HD/CSYNC IN
REMOTE1 IN

①

2.4Vp-p(H)

①

1.2Vp-p(H) RGB (ANALOG)

②

2.4Vp-p(H) S VIDEO

②

1.2Vp-p (H) RGB (ANALOG)

③

1.5Vp-p(H) S VIDEO

③

1.2Vp-p (H) RGB (ANALOG)

④

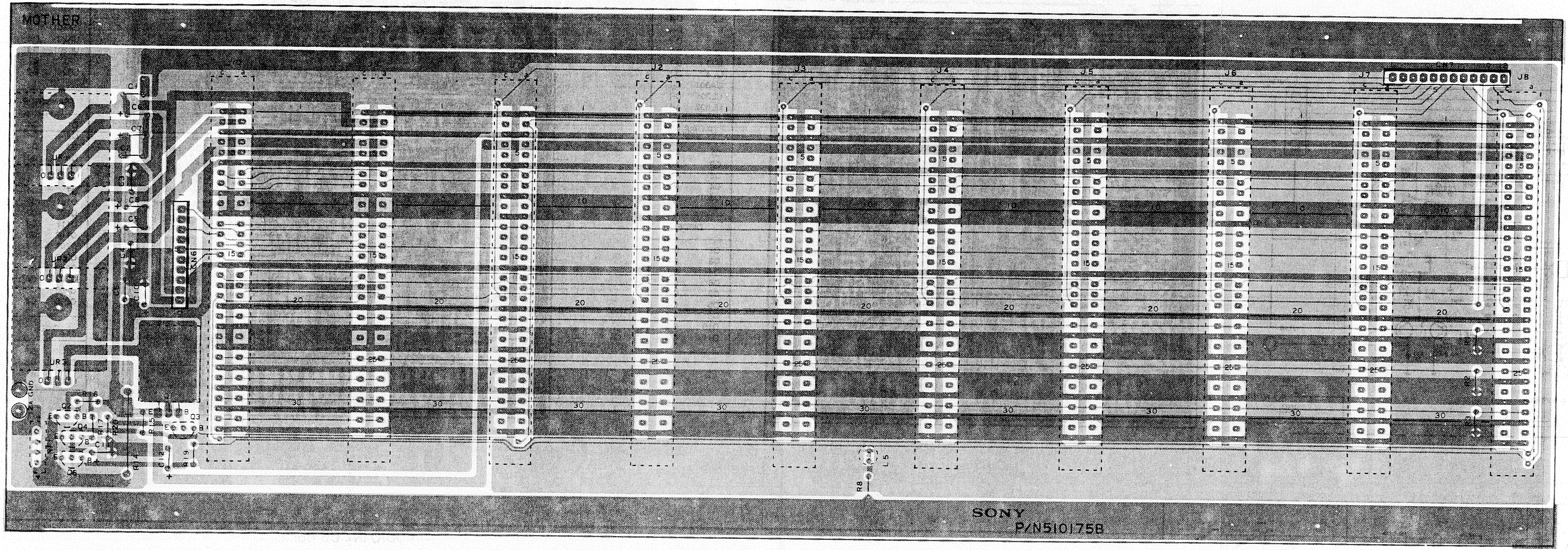
2.1Vp-p (H) RGB (ANALOG)

⑤

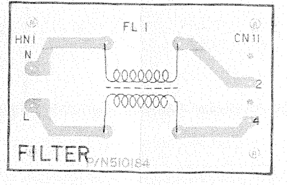
2.1Vp-p (V) RGB (ANALOG)

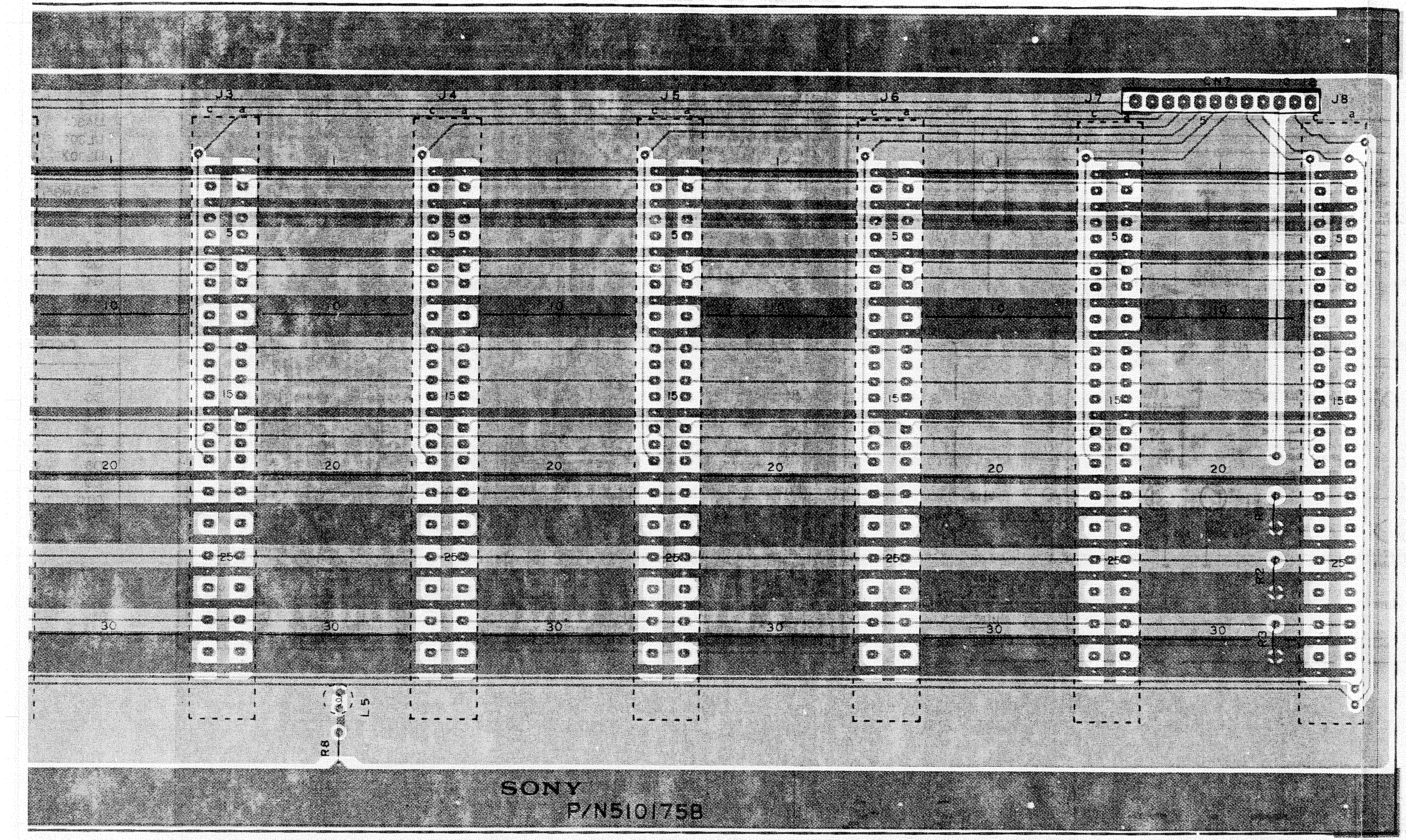
MOTHER **REMOTE1** **FILTER**

— MOTHER Board —

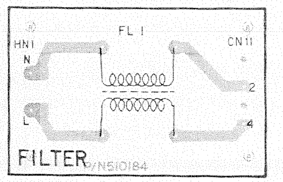

MOTHER
J2
J3
J4
J5
J6
J7
J8
CN6
CN7
UR1
UR2
UR3
Q1
Q2
Q3
Q4
Q5
Q6
R8
L5
GND
SONY
P/N510175B

— FILTER Board —

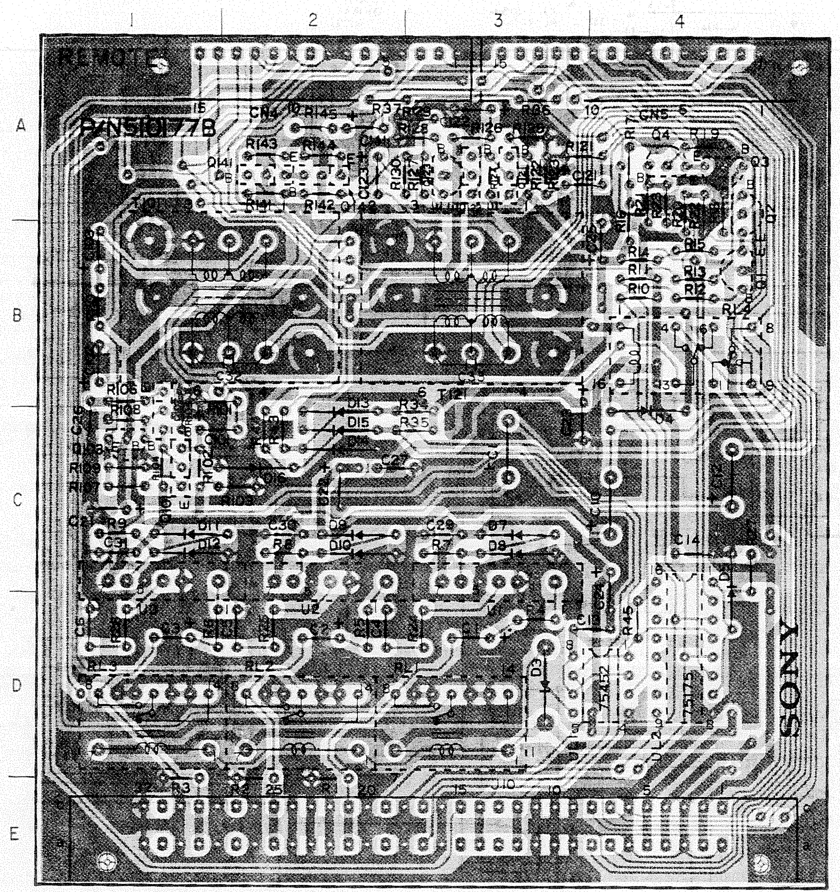

FL1
HN1
N
L
CN11
2
4
FILTER
P/N510184


J3
J4
J5
J6
J7
J8
CN7
5
10
15
20
25
30
R8
L5
SONY
P/N510175B

— FILTER Board —


FL1
HN1
CN11
FILTER
P/N510184

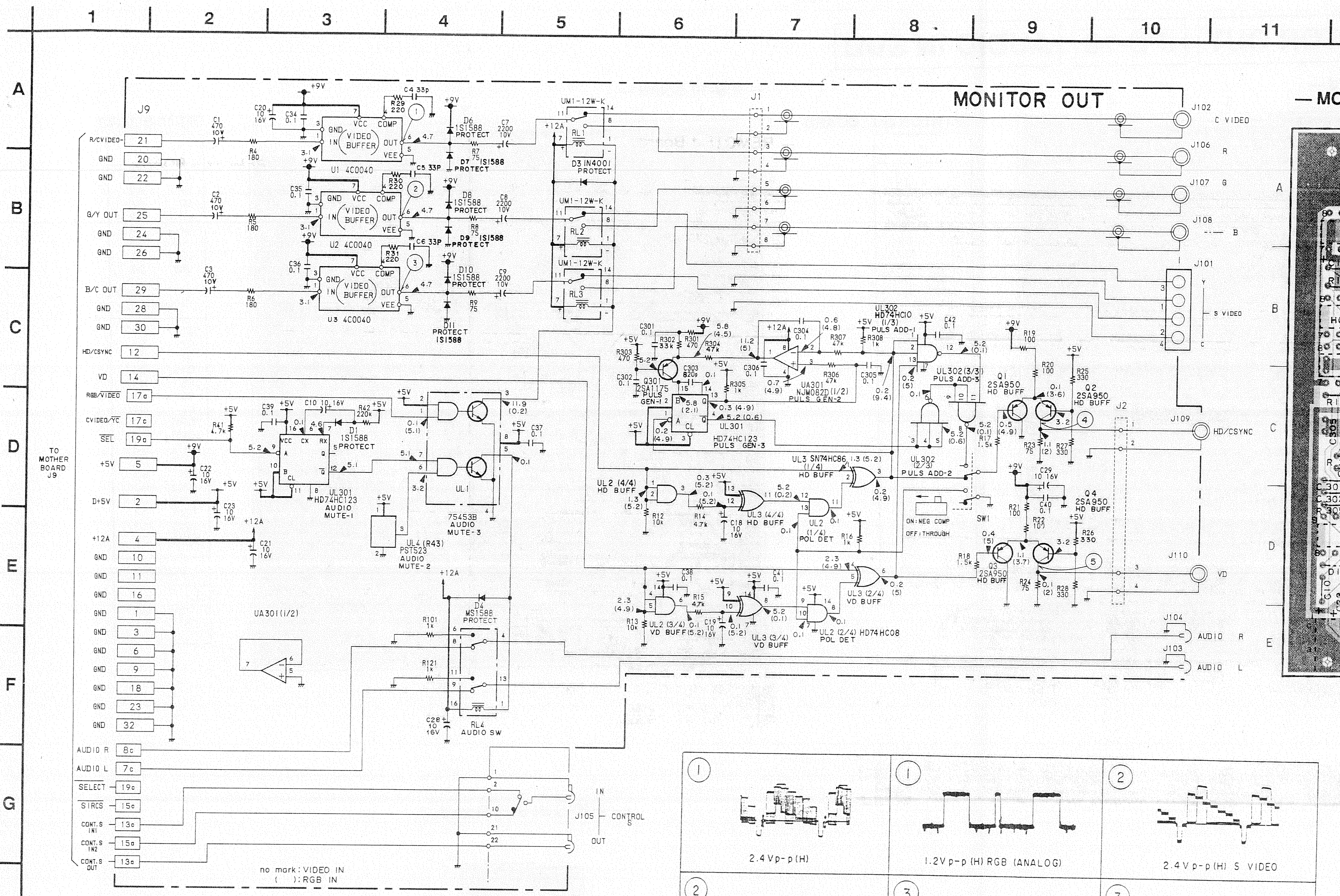
— REMOTE 1 Board —


1
2
3
4
A
B
C
D
E
REMOTE 1
P/N510177B
SONY

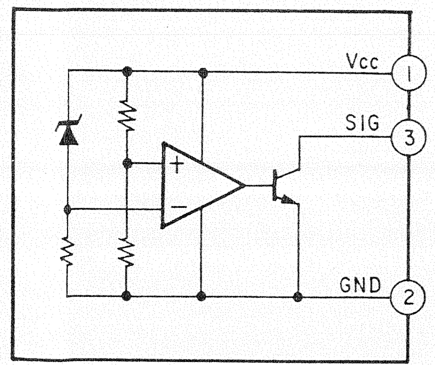
REMOTE 1 BOARD

IC	
U1	C-3
U2	C-2
U3	C-1
UL1	D-3
UL2	D-4
TRANSISTOR	
Q1	B-4
Q2	A-4
Q3	A-4
Q4	A-4
Q101	C-1
Q102	C-1
Q103	C-1
Q121	A-3
Q122	A-3
Q123	A-3
Q141	A-2
Q142	A-2
DIODE	
D3	D-3
D4	C-4
D5	D-4
D7	C-3
D8	C-3
D9	C-2
D10	C-2
D11	C-1
D12	C-1
D13	C-2
D14	C-2
D15	C-2
D16	C-2

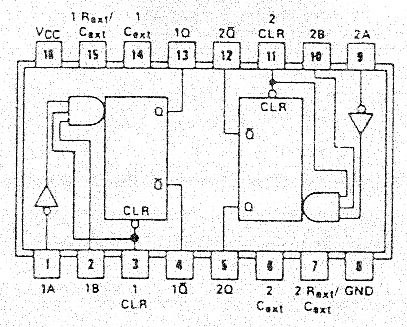
MONITOR OUT | IFB-10 | AUDIO IN SU

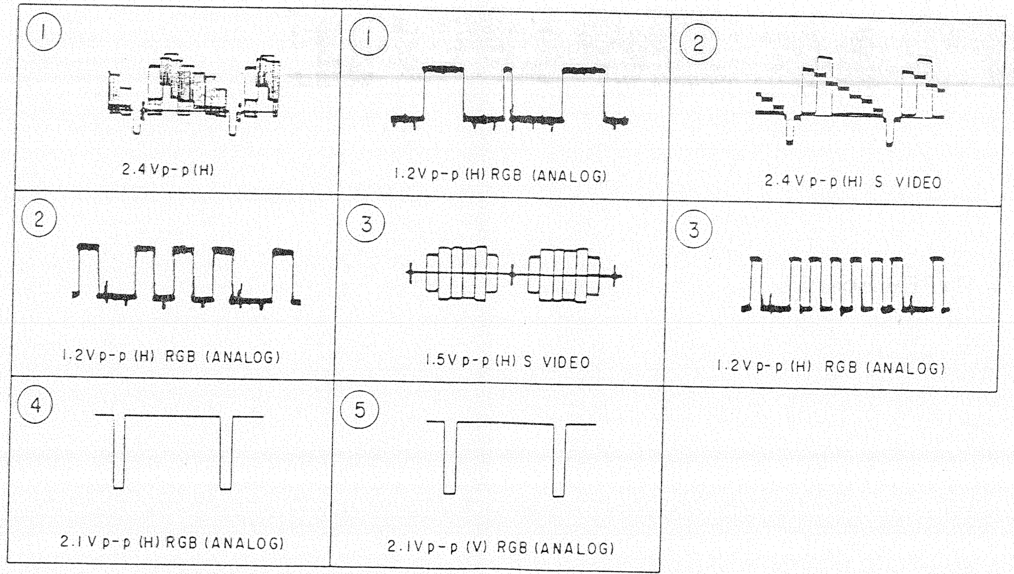

MONITOR OUT
J9
R/CVIDEO
G/Y OUT
B/C OUT
HD/CSYNC
VD
RGB/VIDEO
CVIDEO/YC
SEL
D+5V
+12A
GND
AUDIO R
AUDIO L
SELECT
SIRCS
CONT.S IN1
CONT.S IN2
CONT.S OUT
TO MOTHER BOARD J9
VIDEO BUFFER
U1 4C0040
U2 4C0040
U3 4C0040
D6 1S1588 PROTECT
D7 1S1588 PROTECT
D8 1S1588 PROTECT
D9 1S1588 PROTECT
D10 1S1588 PROTECT
D11 PROTECT 1S1588
D3 1N4001 PROTECT
UM1-12W-K
RL1
RL2
RL3
J1
J102 C VIDEO
J106 R
J107 G
J108 B
J101 S VIDEO
J109 HD/CSYNC
J110 VD
J104 AUDIO R
J103 AUDIO L
J105 CONTROL S IN OUT
J2
Q301 2SA1175 PULS GEN-1
UL301 HD74HC123 PULS GEN-3
UL302 HD74HC10 (1/3) PULS ADD-1
UL302 (3/3) PULS ADD-3
UL302 (2/3) PULS ADD-2
UA301 NJM082D (1/2) PULS GEN-2
UL3 SN74HC86 (1/4) HD BUFF
UL2 (4/4) HD BUFF
UL3 (4/4) HD BUFF
UL2 (1/4) POL DET
UL2 (3/4) VD BUFF
UL3 (3/4) VD BUFF
UL3 (2/4) VD BUFF
UL2 (2/4) HD74HC08 POL DET
Q1 2SA950 HD BUFF
Q2 2SA950 HD BUFF
Q3 2SA950 HD BUFF
Q4 2SA950 HD BUFF
SW1 ON: NEG COMP OFF: THROUGH
UL1 75453B AUDIO MUTE-3
UL301 HD74HC123 AUDIO MUTE-1
UL4 (R43) PST523 AUDIO MUTE-2
D1 1S1588 PROTECT
D4 MS1588 PROTECT
RL4 AUDIO SW
UA301 (1/2)
no mark: VIDEO IN
( ): RGB IN

UL4 PST523

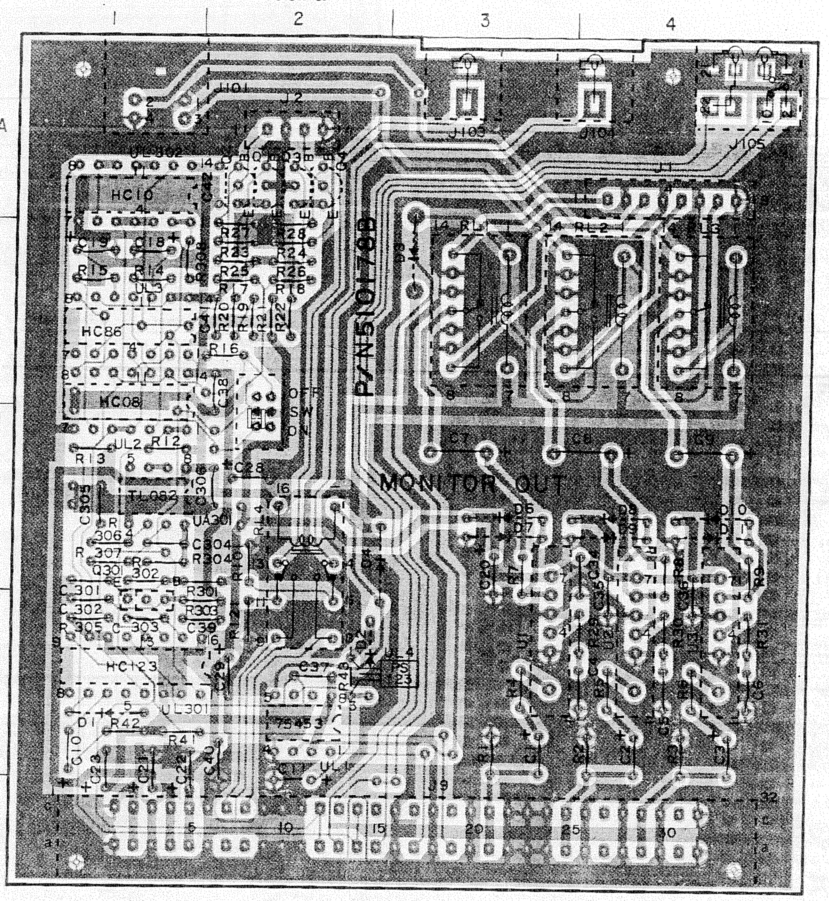

Vcc
1
SIG
3
GND
2

HD74HC123


VCC
1 Rext/Cext
1 Cext
1Q
2Q̄
2 CLR
2B
2A
16
15
14
13
12
11
10
9
CLR
1
2
3
4
5
6
7
8
1A
1B
1 CLR
1Q̄
2Q
2 Cext
2 Rext/Cext
GND



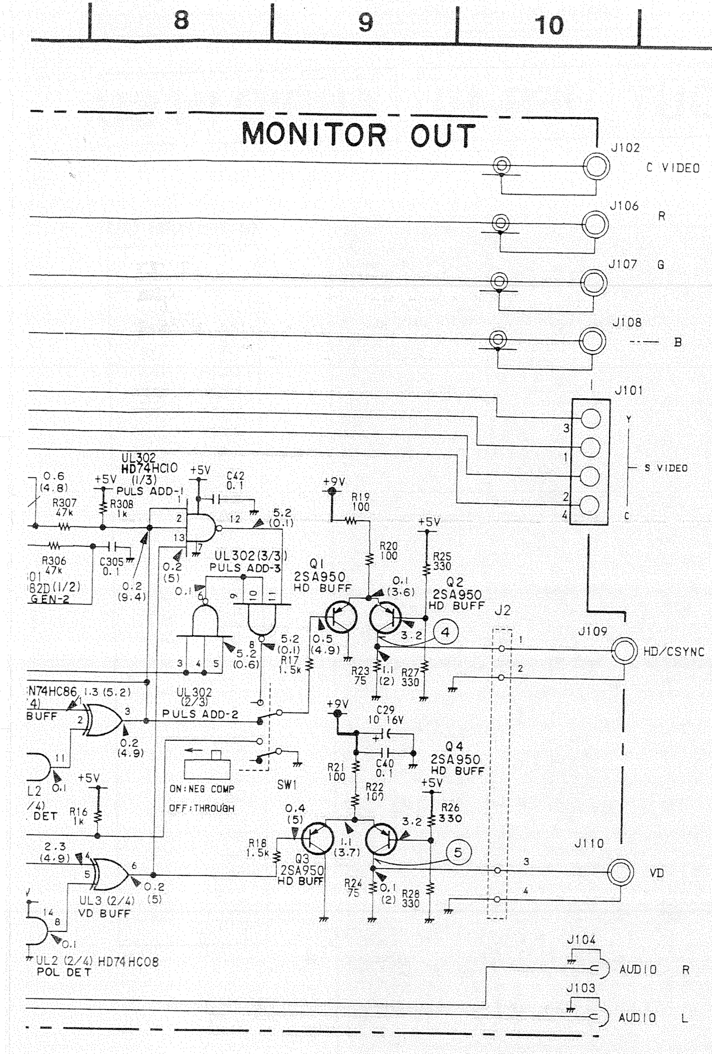
— MONITOR OUT Board —

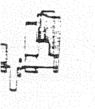

1
2
3
4
A
B
C
D
E
MONITOR OUT
J101
J102
J103
J104
J105
J106
UL302
UA301
UL301
UL1
UL2
UL3
UL4
HC10
HC86
HC08
HC123
TL082
75453
RL1
RL2
RL3
RL4

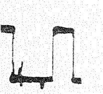
MONITOR OUT

IC	
U1	D-3
U2	D-4
U3	D-4
UL1	D-2
UL2	B-1
UL3	B-1
UL4	D-1
UA301	C-1
UL301	D-1
UL302	A-1
TRANSISTOR	
Q1	A-2
Q2	A-2
Q3	A-2
Q4	A-2
Q301	C-1
DIODE	
D1	D-1
D3	A-3
D4	C-1
D6	C-3
D7	C-3
D8	C-4
D9	C-4
D10	C-4
D11	C-4

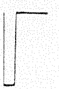
MONITOR OUT | IFB-10 | AUDIO IN SUB


8
9
10
11
MONITOR OUT
J102 C VIDEO
J106 R
J107 G
J108 B
J101 S VIDEO
Y
C
UL302 HD74HC10 (1/3) PULS ADD-1
UL302 (3/3) PULS ADD-3
UL302 (2/3) PULS ADD-2
Q1 2SA950 HD BUFF
Q2 2SA950 HD BUFF
Q3 2SA950 HD BUFF
Q4 2SA950 HD BUFF
SW1
ON: NEG COMP
OFF: THROUGH
UL3 (2/4) VD BUFF
UL2 (2/4) HD74HC08 POL DET
J2
J109 HD/CSYNC
J110 VD
J104 AUDIO R
J103 AUDIO L

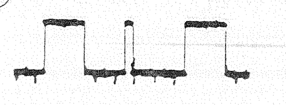




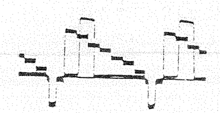
NALOG)



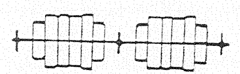
NALOG)

① 

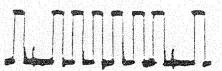
1.2V p-p (H) RGB (ANALOG)

② 

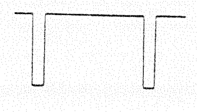
2.4V p-p (H) S VIDEO

③ 

1.5V p-p (H) S VIDEO

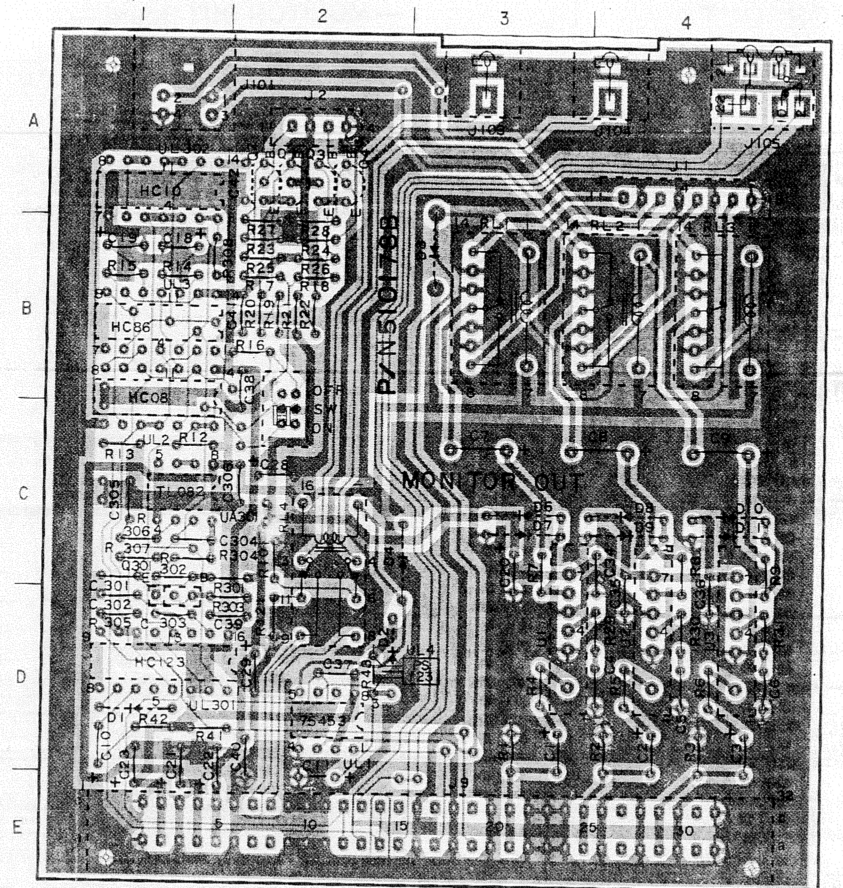
③ 

1.2V p-p (H) RGB (ANALOG)

⑤ 

2.1V p-p (V) RGB (ANALOG)

— MONITOR OUT Board —


1
2
3
4
A
B
C
D
E
MONITOR OUT
P/N 5101700

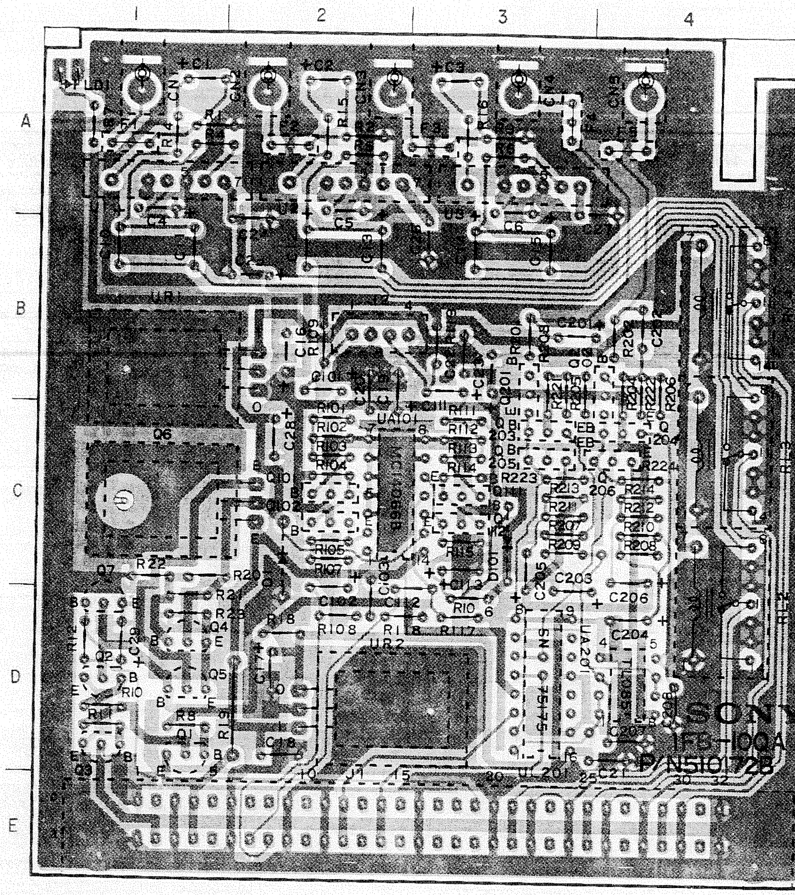
MONITOR OUT BOARD

IC	
U1	D-3
U2	D-4
U3	D-4
UL1	D-2
UL2	B-1
UL3	B-1
UL4	D-1
UA301	C-1
UL301	D-1
UL302	A-1

TRANSISTOR	
Q1	A-2
Q2	A-2
Q3	A-2
Q4	A-2
Q301	C-1

DIODE	
D1	D-1
D3	A-3
D4	C-1
D6	C-3
D7	C-3
D8	C-4
D9	C-4
D10	C-4
D11	C-4

— IFB-10 Board —


1
2
3
4
A
B
C
D
E
SONY
IFB-100A
P/N 5101728

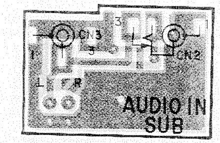
IFB-10 BOARD

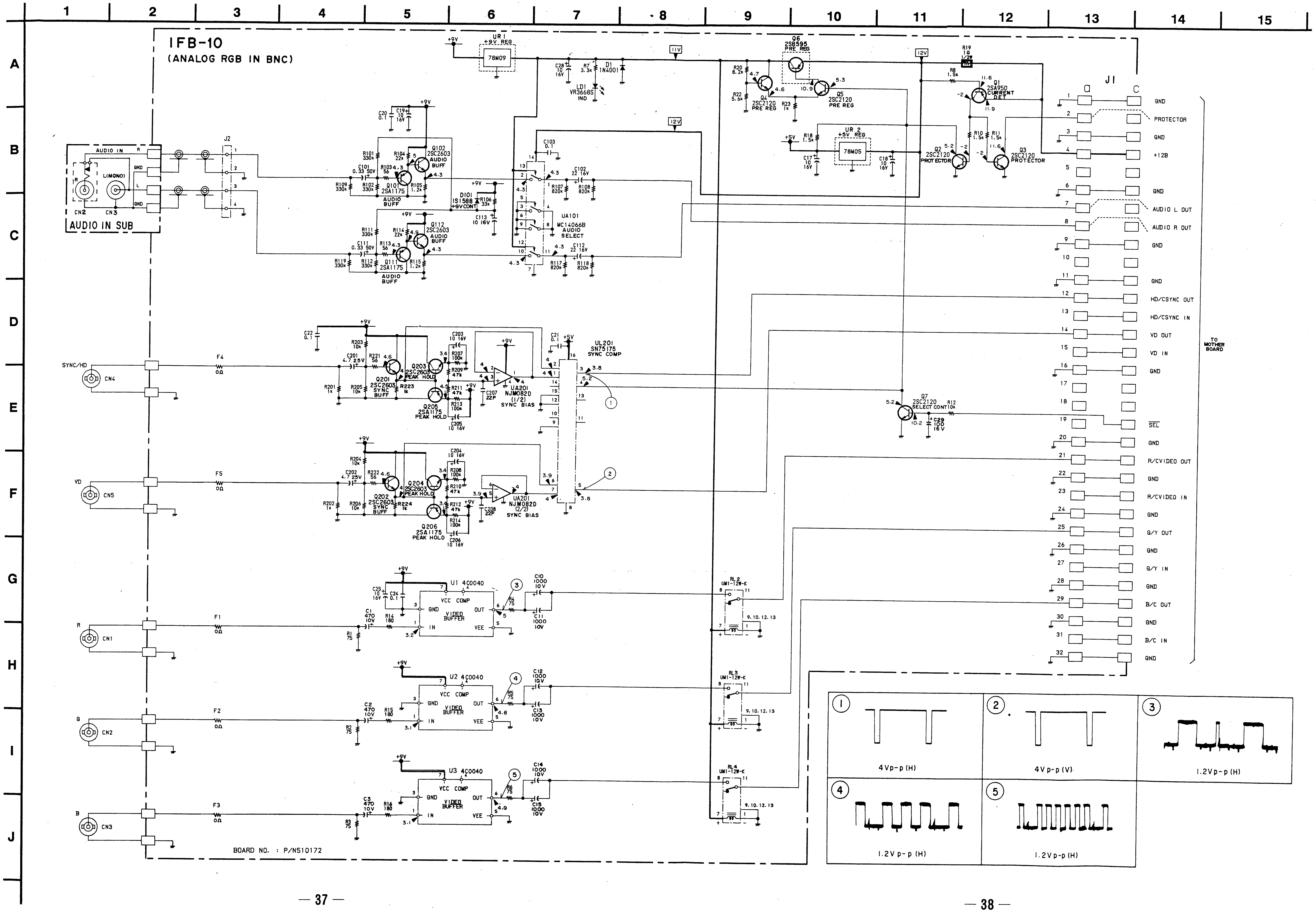
IC	
U1	A-1
U2	A-2
U3	A-3
UA101	C-2
UA201	D-4
UL201	D-3
UR1	B-1
UR2	D-2

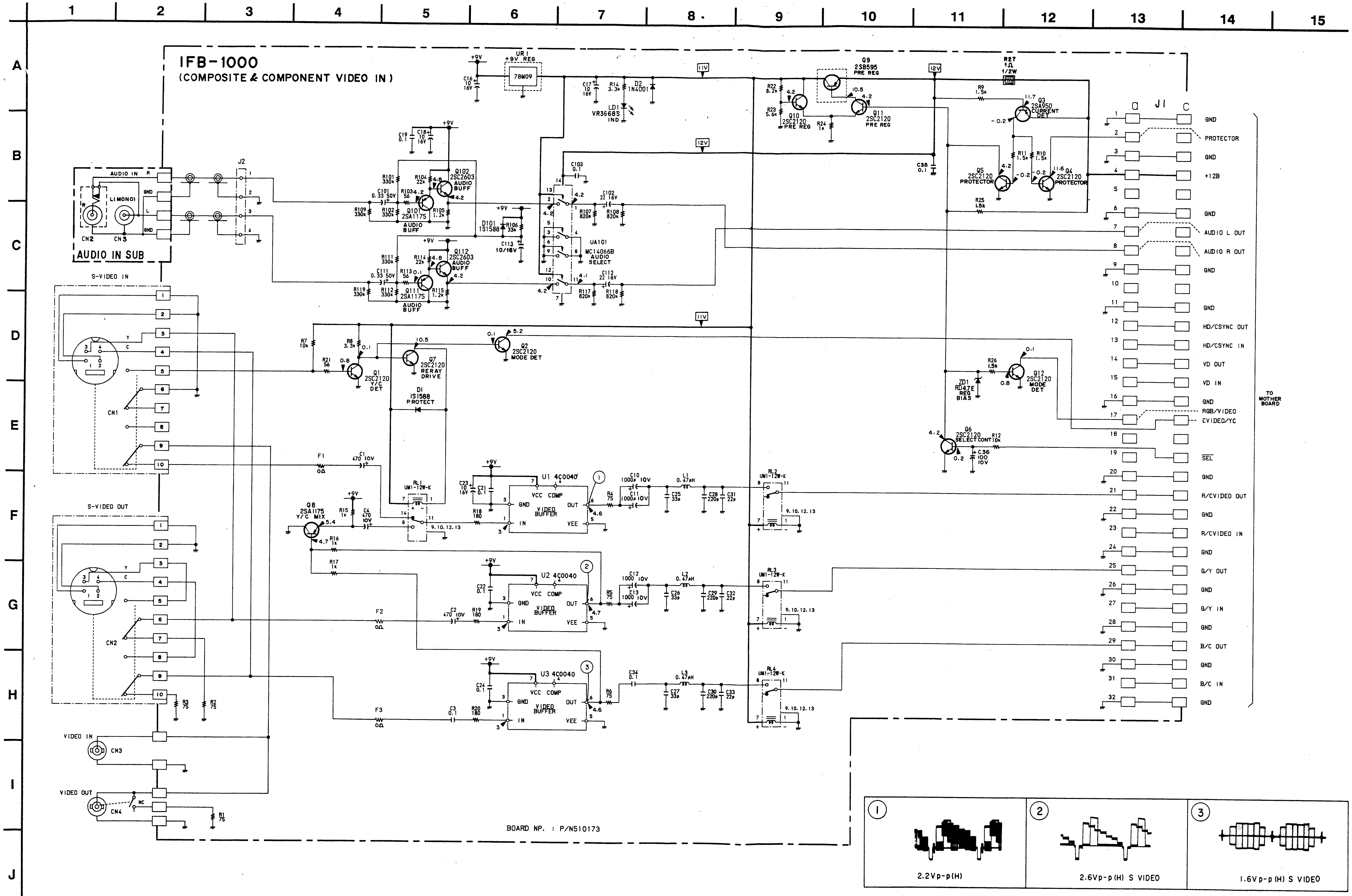
TRANSISTOR	
Q1	D-1
Q2	D-1
Q3	D-1
Q4	D-1
Q5	D-1
Q6	C-1
Q7	C-1
Q101	C-2
Q102	C-2
Q111	C-3
Q112	C-3
Q201	B-3
Q202	B-3
Q203	C-3
Q204	C-4
Q205	C-3
Q206	C-4

DIODE	
D1	C-2
D101	C-3
LD1	A-1

— AUDIO IN SUB Board —


CN3
CN2
AUDIO IN SUB


IFB-10
(ANALOG RGB IN BNC)
AUDIO IN SUB
AUDIO IN
L(MONO)
CN2
CN3
J2
UR1 +9V REG 78M09
LD1 VR3668S IND
D1 1N4001
Q6 2SB595 PRE REG
Q4 2SC2120 PRE REG
Q5 2SC2120 PRE REG
UR 2 +5V REG 78M05
Q1 2SA950 CURRENT DET
Q2 2SC2120 PROTECTOR
Q3 2SC2120 PROTECTOR
Q101 2SA1175 AUDIO BUFF
Q102 2SC2603 AUDIO BUFF
Q111 2SA1175 AUDIO BUFF
Q112 2SC2603 AUDIO BUFF
D101 1S1588 +9V CONT
UA101 MC14066B AUDIO SELECT
J1
GND
PROTECTOR
+12B
AUDIO L OUT
AUDIO R OUT
HD/CSYNC OUT
HD/CSYNC IN
VD OUT
VD IN
SEL
R/CVIDEO OUT
R/CVIDEO IN
G/Y OUT
G/Y IN
B/C OUT
B/C IN
TO MOTHER BOARD
SYNC/HD
CN4
VD
CN5
Q201 2SC2603 SYNC BUFF
Q203 2SC2603 PEAK HOLD
Q205 2SA1175 PEAK HOLD
UA201 NJM082D (1/2) SYNC BIAS
UL201 SN75175 SYNC COMP
Q202 2SC2603 SYNC BUFF
Q204 2SC2603 PEAK HOLD
Q206 2SA1175 PEAK HOLD
UA201 NJM082D (2/2) SYNC BIAS
Q7 2SC2120 SELECT CONT
U1 4C0040
U2 4C0040
U3 4C0040
VCC COMP
GND
VIDEO BUFFER
IN
OUT
VEE
RL2 UM1-12W-K
RL3 UM1-12W-K
RL4 UM1-12W-K
CN1
CN2
CN3
BOARD NO. : P/N510172
①
4Vp-p (H)
②
4Vp-p (V)
③
1.2Vp-p (H)
④
1.2Vp-p (H)
⑤
1.2Vp-p (H)


1
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7
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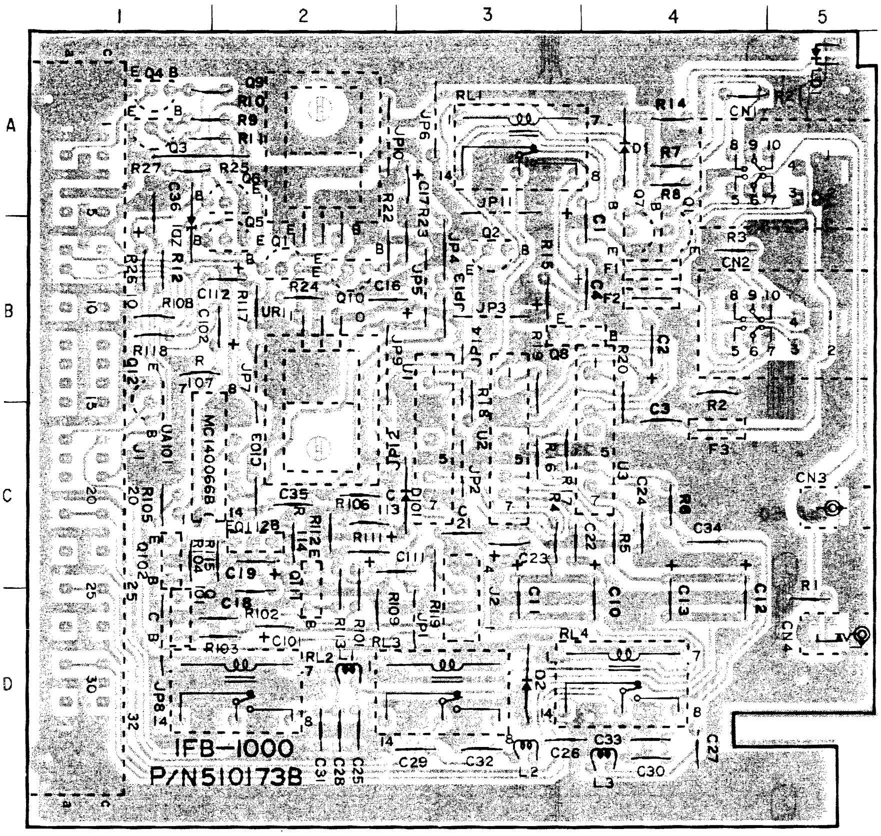
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
IFB-1000
(COMPOSITE & COMPONENT VIDEO IN)
AUDIO IN
R
GND
L
L(MONO)
CN2
CN3
AUDIO IN SUB
J2
S-VIDEO IN
S-VIDEO OUT
CN1
CN2
VIDEO IN
CN3
VIDEO OUT
CN4
NC
R1 75
R2 75
R3 75
+9V
UR1 +9V REG
78M09
C16 10 16V
C17 10 16V
R14 3.3k
D2 1N4001
LD1 VR3668S IND
11V
12V
Q9 2SB595 PRE REG
R22 8.2k
R23 5.6k
Q10 2SC2120 PRE REG
R24 1k
Q11 2SC2120 PRE REG
R27 1Ω 1/2W
R9 1.5k
Q3 2SA950 CURRENT DET
R11 1.5k
R10 1.5k
Q5 2SC2120 PROTECTOR
Q4 2SC2120 PROTECTOR
R25 1.5k
C35 0.1
C19 0.1
C18 10 16V
R101 330k
C101 0.33 50V
R103 56
R104 22k
Q102 2SC2603 AUDIO BUFF
Q101 2SA1175 AUDIO BUFF
R105 1.2k
R109 330k
R102 330k
D101 1S1588
R106 33k
C113 10/16V
R111 330k
C111 0.33 50V
R113 56
R114 22k
Q112 2SC2603 AUDIO BUFF
Q111 2SA1175 AUDIO BUFF
R115 1.2k
R119 330k
R112 330k
C103 0.1
C102 22 16V
R107 820k
R108 820k
UA101 MC14066B AUDIO SELECT
C112 22 16V
R117 820k
R118 820k
R7 10k
R8 3.3k
R21 56
Q1 2SC2120 Y/C DET
Q7 2SC2120 RERAY DRIVE
Q2 2SC2120 MODE DET
D1 1S1588 PROTECT
RL1 UM1-12W-K
F1 0Ω
C1 470 10V
Q8 2SA1175 Y/C MIX
R15 1k
C4 470 10V
R16 1k
R17 1k
C23 10 16V
C21 0.1
R18 180
U1 4C0040
VCC COMP
GND
VIDEO BUFFER
OUT
IN
VEE
R4 75
C10 1000μ 10V
C11 1000μ 10V
L1 0.47μH
C25 33p
C28 220p
C31 22p
RL2 UM1-12W-K
9.10.12.13
C22 0.1
U2 4C0040
F2 0Ω
C2 470 10V
R19 180
R5 75
C12 1000 10V
C13 1000 10V
L2 0.47μH
C26 33p
C29 220p
C32 22p
RL3 UM1-12W-K
C24 0.1
U3 4C0040
F3 0Ω
C3 0.1
R20 180
R6 75
C34 0.1
L3 0.47μH
C27 33p
C30 220p
C33 22p
RL4 UM1-12W-K
R26 1.5k
ZD1 RD47E REG BIAS
Q12 2SC2120 MODE DET
Q6 2SC2120 SELECT CONT
R12 10k
C36 100 10V
J1
GND
PROTECTOR
GND
+12B
GND
AUDIO L OUT
AUDIO R OUT
GND
GND
HD/CSYNC OUT
HD/CSYNC IN
VD OUT
VD IN
GND
RGB/VIDEO
CVIDEO/YC
SEL
GND
R/CVIDEO OUT
GND
R/CVIDEO IN
GND
G/Y OUT
GND
G/Y IN
GND
B/C OUT
GND
B/C IN
GND
TO MOTHER BOARD
BOARD NP. : P/N510173
①
②
③
2.2Vp-p(H)
2.6Vp-p(H) S VIDEO
1.6Vp-p(H) S VIDEO

IFB-1000 | AUDIO IN SUB

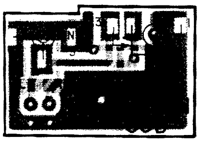
— IFB-1000 Board —


1
2
3
4
5
A
B
C
D
IFB-1000
P/N510173B
U1
U2
U3
UR1
UA101
MC14006B
CN1
CN2
CN3
CN4
RL1
RL2
RL3
RL4

IFB-1000 BOARD

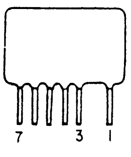
IC	
U1	B-3
U2	C-3
U3	C-4
UR1	B-2
UA101	C-1
TRANSISTOR	
Q1	A-4
Q2	B-3
Q3	A-1
Q4	A-1
Q5	B-1
Q6	A-2
Q7	A-4
Q8	B-3
Q9	A-2
Q10	B-2
Q11	B-2
Q12	B-1
Q101	D-1
Q102	C-1
Q112	C-2
Q111	C-2
DIODE	
D1	A-4
D2	D-3
D101	C-3

— AUDIO IN SUB Board —



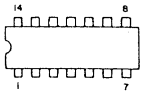
4-5. SEMICONDUCTORS

4C0040



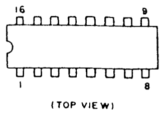
MARKING SIDE VIEW

74HC00
74HC10
74HC27
74HC30
74HC4066
74HC86
LC74HC08
MC14066BCP
SIN74HC86
SN74HC08NS
SN74HC27NS
SN74HC86NS
SN74LS00N
SN74LS10N
TC74HC10P
TC74HC30P
TC74HC4066AP



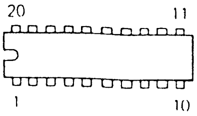
(TOP VIEW)

74HC123
74HC148
74HC4049
74HC4051
74LS123
MC74HC4049N
MC74HC4051N
SN74LS123N
SN75175
TC74HC148P



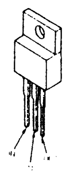
(TOP VIEW)

74LS240
74LS244
SN74LS240N
SN74LS244N

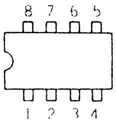


(Top view)

7805
7809
78M05
78M09
M5F7805
NJM78M05FA
NJM78M09A
RC7809FA
RC78M05FA
RC78M09FA

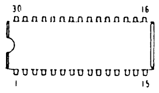


HD75452P
NJM082D
SN75452B
SN75453B
TL082CP
TL510CP



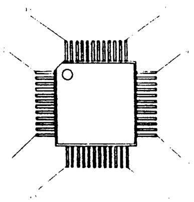
(Top view)

M50461-104SP
M50461-152SP



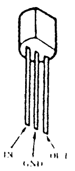
(Top view)

MB8855-1314N

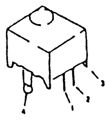


(TOP VIEW)

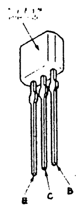
PST523D



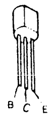
SBX1483-51
SBX1483-59



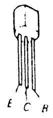
2SA1175
2SC2785



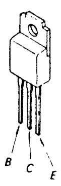
2SA950



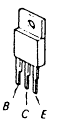
2SA952



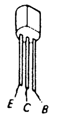
2SB1016



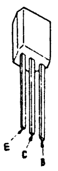
2SB595



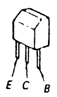
2SC2120



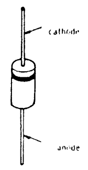
2SC2603



2SD774



10E2
1N4001
1S1588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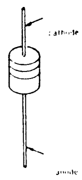
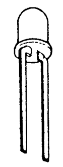
anode

RD4.7ESB1
RD5.6ESB
RD6.2ESB2


cathode
anode

VR3668S



SECTION 5
EXPLODED VIEW

NOTE:

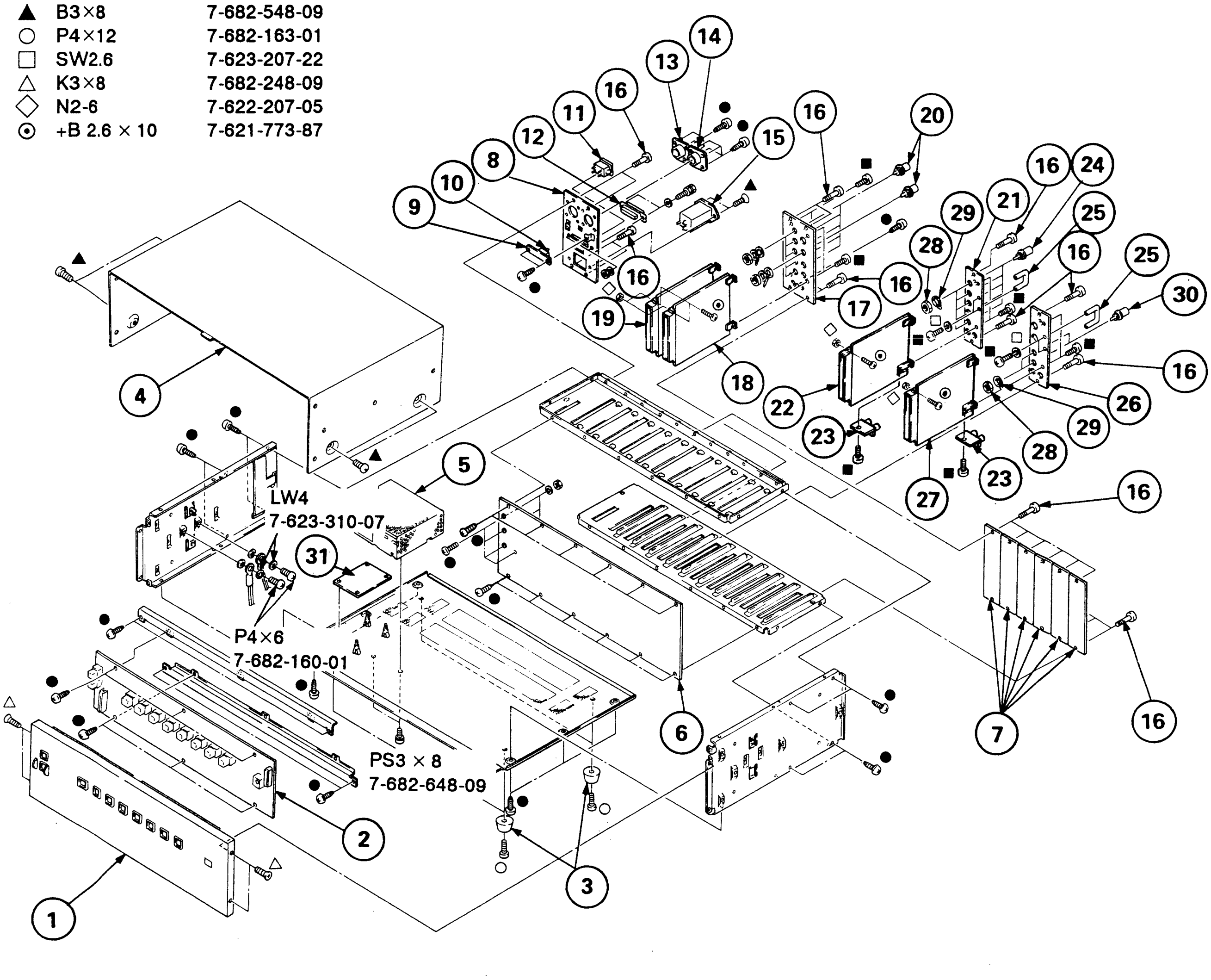
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " ⋆ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. OVERALL ASSEMBLY

●	BVTP3×8	7-685-646-79
■	P2.6×6	7-621-284-20
▲	B3×8	7-682-548-09
○	P4×12	7-682-163-01
□	SW2.6	7-623-207-22
△	K3×8	7-682-248-09
◇	N2-6	7-622-207-05
⊙	+B 2.6 × 10	7-621-773-87



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	9-996-134-01	PANEL ASSY, FRONT	
2	*9-996-884-01	SW & CONTROL BOARD, COMPLETE	
3	X-4809-908-9	FOOT B2, RUBBER	
4	*9-996-127-01	COVER	
5	⚠.9-996-146-01	SWITCHING, REGULATOR	
6	*9-996-145-01	MOTHER BOARD, COMPLETE	
7	9-996-132-01	PLATE, BLIND	
8	9-996-163-01	PANEL, AC IN	
9	*9-996-174-01	MODE SELECT SWITCH BOARD	
10	9-996-173-01	SWITCH, MODE SELECT	
11	⚠.9-996-165-01	SWITCH, MAIN POWER	
12	9-996-166-01	CONNECTOR ASSY, D-SUB	
13	9-996-162-01	CONNECTOR ASSY, 14P (ROUND TYPE)(FEMALE)	
14	9-996-161-01	CONNECTOR ASSY, 14P (ROUND TYPE) (MALE)	
15	⚠.9-996-164-01	AC INLET & NOISE FILTER	
16	4-396-203-01	+B 3X12	
17	9-996-158-01	PANEL, MONITOR OUT	
18	*9-996-156-01	MONITOR OUT BOARD, COMPLETE	
19	*9-996-157-01	REMOTE 1 BOARD, COMPLETE	
20	9-996-176-01	CONNECTOR, BNC	
21	9-996-120-01	PANEL, IF BOARD	
22	*9-996-801-01	IFB-10 BOARD, COMPLETE	
23	*9-996-802-01	AUDIO-IN SUB BOARD, COMPLETE	
24	9-996-112-01	CONNECTOR, BNC	
25	9-996-123-01	HANDLE	
26	9-996-216-01	PANEL (1000), IF	
27	*9-996-215-01	IFB-1000 BOARD, COMPLETE	
28	9-996-113-01	NUT	
29	9-996-114-01	TERMINAL	
30	9-996-225-01	BNC CONNECTOR (SWITCH)	
31	*9-996-883-01	FILTER BOARD, COMPLETE	

FILTER | MODE SELECT SWITCH | MOTHER | MONITOR OUT

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*9-996-883-01	FILTER BOARD, COMPLETE				
		********************				
	*9-996-886-01	FILTER BOARD				
		<CONNECTOR>				
CN11	9-996-198-01	PIN HEADER				
		<FILTER>				
FL1	1-421-776-11	LFT				
***						
	*9-996-174-01	MODE SELECT SWITCH BOARD				
		************************				
		<SWITCH>				
SW101	9-996-173-01	MODE SELECT SWITCH				
***						
	*9-996-145-01	MOTHER BOARD, COMPLETE				
		**********************				
		<CAPACITOR>				
C1	9-996-111-01	CERAMIC	0.1MF		50V	
C2	9-996-111-01	CERAMIC	0.1MF		50V	
C3	9-996-111-01	CERAMIC	0.1MF		50V	
C4	9-996-111-01	CERAMIC	0.1MF		50V	
C5	9-996-111-01	CERAMIC	0.1MF		50V	
C6	1-123-356-00	ELECT	10MF	16%	50V	
C7	1-123-356-00	ELECT	10MF	16%	50V	
C8	1-123-356-00	ELECT	10MF	16%	50V	
C9	1-123-356-00	ELECT	10MF	16%	50V	
C10	1-123-356-00	ELECT	10MF	16%	50V	
C11	1-123-356-00	ELECT	10MF	16%	50V	
C12	1-123-333-00	ELECT	100MF	20%	16V	
		<CONNECTOR>				
CN6	*1-564-513-11	PLUG, CONNECTOR 10P				
CN7	*1-564-515-11	PLUG, CONNECTOR 12P				
		<HARNESS>				
HN2	*9-996-150-01	HARNESS 2				
		<JACK>				
J1	*1-568-985-11	FEMALE CONNECTOR 64P				
J2	*1-568-985-11	FEMALE CONNECTOR 64P				
J3	*1-568-985-11	FEMALE CONNECTOR 64P				
J4	*1-568-985-11	FEMALE CONNECTOR 64P				
J5	*1-568-985-11	FEMALE CONNECTOR 64P				

REF.NO.	PART NO.	DESCRIPTION				REMARK
J6	*1-568-985-11	FEMALE CONNECTOR 64P				
J7	*1-568-985-11	FEMALE CONNECTOR 64P				
J8	*1-568-985-11	FEMALE CONNECTOR 64P				
J9	*1-568-985-11	FEMALE CONNECTOR 64P				
J10	*1-568-985-11	FEMALE CONNECTOR 64P				
		<COIL>				
L5	1-408-425-00	INDUCTOR 220UH				
		<FILTER>				
NF1	9-996-200-01	NOISE FILTER				
		<TRANSISTOR>				
Q1	8-729-202-99	TRANSISTOR 2SB1016-Y				
Q2	8-729-195-23	TRANSISTOR 2SA952-K2				
Q3	8-729-212-02	TRANSISTOR 2SC2120-Y				
Q4	8-729-212-02	TRANSISTOR 2SC2120-Y				
Q6	8-729-212-02	TRANSISTOR 2SC2120-Y				
		<RESISTOR>				
R1	1-247-804-11	CARBON	75	5%	1/4W	
R2	1-247-804-11	CARBON	75	5%	1/4W	
R3	1-247-804-11	CARBON	75	5%	1/4W	
R8	1-249-389-11	CARBON	4.7	5%	1/4W	
R14	1-216-361-00	METAL OXIDE	0.22	5%	2W	F
R15	1-249-419-11	CARBON	1.5K	5%	1/4W	
R16	1-249-419-11	CARBON	1.5K	5%	1/4W	
R17	1-249-419-11	CARBON	1.5K	5%	1/4W	
R19	1-249-429-11	CARBON	10K	5%	1/4W	
R20	1-249-410-11	CARBON	270	5%	1/4W	
		<IC>				
UR1	8-759-982-31	IC RC78M05FA				
UR2	8-759-604-29	IC M5F7805				
UR3	8-759-982-10	IC RC7809FA				
***						
	*9-996-156-01	MONITOR OUT BOARD, COMPLETE				
		***************************				
	*9-996-888-01	VIDEO OUT CABLE (J1)				
	*9-996-889-01	SYNC OUT CABLE (J2)				
		<CAPACITOR>				
C1	1-126-103-11	ELECT	470MF	20%	10V	
C2	1-126-103-11	ELECT	470MF	20%	10V	
C3	1-126-103-11	ELECT	470MF	20%	10V	
C4	1-102-518-41	CERAMIC	33PF	5%	50V	
C5	1-102-518-41	CERAMIC	33PF	5%	50V	

MONITOR OUT

REF.NO.	PART NO.	DESCRIPTION			REMARK
C6	1-102-518-41	CERAMIC	33PF	5%	50V
C7	1-126-234-11	ELECT	2200MF	20%	10V
C8	1-126-234-11	ELECT	2200MF	20%	10V
C9	1-126-234-11	ELECT	2200MF	20%	10V
C10	1-123-356-00	ELECT	10MF	20%	16V
C18	1-123-356-00	ELECT	10MF	20%	16V
C19	1-123-356-00	ELECT	10MF	20%	16V
C20	1-123-356-00	ELECT	10MF	20%	16V
C21	1-123-356-00	ELECT	10MF	20%	16V
C22	1-123-356-00	ELECT	10MF	20%	16V
C23	1-123-356-00	ELECT	10MF	20%	16V
C28	1-123-356-00	ELECT	10MF	20%	16V
C29	1-123-356-00	ELECT	10MF	20%	16V
C34	9-996-111-01	CERAMIC	0.1MF		50V
C35	9-996-111-01	CERAMIC	0.1MF		50V
C36	9-996-111-01	CERAMIC	0.1MF		50V
C37	9-996-111-01	CERAMIC	0.1MF		50V
C38	9-996-111-01	CERAMIC	0.1MF		50V
C39	9-996-111-01	CERAMIC	0.1MF		50V
C40	9-996-111-01	CERAMIC	0.1MF		50V
C41	9-996-111-01	CERAMIC	0.1MF		50V
C42	9-996-111-01	CERAMIC	0.1MF		50V
C301	9-996-111-01	CERAMIC	0.1MF		50V
C302	9-996-111-01	CERAMIC	0.1MF		50V
C303	1-102-117-00	CERAMIC	820PF	10%	50V
C304	9-996-111-01	CERAMIC	0.1MF		50V
C305	9-996-111-01	CERAMIC	0.1MF		50V
C306	9-996-111-01	CERAMIC	0.1MF		50V
		<DIODE>			
D1	8-719-820-59	DIODE 1S1588			
D3	8-719-200-02	DIODE 10E2			
D4	8-719-820-59	DIODE 1S1588			
D6	8-719-820-59	DIODE 1S1588			
D7	8-719-820-59	DIODE 1S1588			
D8	8-719-820-59	DIODE 1S1588			
D9	8-719-820-59	DIODE 1S1588			
D10	8-719-820-59	DIODE 1S1588			
D11	8-719-820-59	DIODE 1S1588			
		<JACK>			
J1	9-996-894-01	CONNECTOR			
J2	9-996-895-01	CONNECTOR			
J9	1-568-981-11	MALE CONNECTOR 64P			
J101	9-996-175-01	S TERMINAL CONNECTOR			
J102	9-996-176-01	BNC CONNECTOR			
J103	9-996-179-01	PIN JACK L			
J104	9-996-180-01	PIN JACK R			
J105	9-996-181-01	SMALL JACK			
J106	9-996-176-01	BNC CONNECTOR			
J107	9-996-176-01	BNC CONNECTOR			
J108	9-996-176-01	BNC CONNECTOR			
J109	9-996-176-01	BNC CONNECTOR			
J110	9-996-176-01	BNC CONNECTOR			
		<TRANSISTOR>			
Q1	8-729-195-23	TRANSISTOR 2SA952-K2			
Q2	8-729-195-23	TRANSISTOR 2SA952-K2			
Q3	8-729-195-23	TRANSISTOR 2SA952-K2			
Q4	8-729-195-23	TRANSISTOR 2SA952-K2			
Q301	8-729-119-76	TRANSISTOR 2SA1175-HF			

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R4	1-249-408-11	CARBON	180	5%	1/4W	
R5	1-249-408-11	CARBON	180	5%	1/4W	
R6	1-249-408-11	CARBON	180	5%	1/4W	
R7	1-247-804-11	CARBON	75	5%	1/4W	
R8	1-247-804-11	CARBON	75	5%	1/4W	
R9	1-247-804-11	CARBON	75	5%	1/4W	
R12	1-249-429-11	CARBON	10K	5%	1/4W	
R13	1-249-429-11	CARBON	10K	5%	1/4W	
R14	1-249-425-11	CARBON	4.7K	5%	1/4W	
R15	1-249-425-11	CARBON	4.7K	5%	1/4W	
R16	1-249-417-11	CARBON	1K	5%	1/4W	
R17	1-249-419-11	CARBON	1.5K	5%	1/4W	
R18	1-249-419-11	CARBON	1.5K	5%	1/4W	
R19	1-249-405-11	CARBON	100	5%	1/4W	
R20	1-249-405-11	CARBON	100	5%	1/4W	
R21	1-249-405-11	CARBON	100	5%	1/4W	
R22	1-249-405-11	CARBON	100	5%	1/4W	
R23	1-247-804-11	CARBON	75	5%	1/4W	
R24	1-247-804-11	CARBON	75	5%	1/4W	
R25	1-249-411-11	CARBON	330	5%	1/4W	
R26	1-249-411-11	CARBON	330	5%	1/4W	
R27	1-249-411-11	CARBON	330	5%	1/4W	
R28	1-249-411-11	CARBON	330	5%	1/4W	
R29	1-249-409-11	CARBON	220	5%	1/4W	
R30	1-249-409-11	CARBON	220	5%	1/4W	
R31	1-249-409-11	CARBON	220	5%	1/4W	
R41	1-249-425-11	CARBON	4.7K	5%	1/4W	
R42	1-247-887-00	CARBON	220K	5%	1/4W	
R101	1-249-417-11	CARBON	1K	5%	1/4W	
R121	1-249-417-11	CARBON	1K	5%	1/4W	
R301	1-249-413-11	CARBON	470	5%	1/4W	
R302	1-249-435-11	CARBON	33K	5%	1/4W	
R303	1-249-413-11	CARBON	470	5%	1/4W	
R304	1-249-437-11	CARBON	47K	5%	1/4W	
R305	1-249-417-11	CARBON	1K	5%	1/4W	
R306	1-249-437-11	CARBON	47K	5%	1/4W	
R307	1-249-437-11	CARBON	47K	5%	1/4W	
R308	1-249-417-11	CARBON	1K	5%	1/4W	
		<RELAY>				
RL1	1-515-757-11	RELAY				
RL2	1-515-757-11	RELAY				
RL3	1-515-757-11	RELAY				
RL4	9-996-184-01	RELAY				
		<SWITCH>				
SW1	9-996-152-01	SLIDE SWITCH				
		<IC>				
U1	9-996-108-01	IC 4C0040				
U2	9-996-108-01	IC 4C0040				
U3	9-996-108-01	IC 4C0040				
UA301	8-759-990-82	IC TL082CP				
UL1	8-759-354-52	IC HD75452P				
UL2	8-759-803-70	IC LC74HC08				
UL3	8-759-921-10	IC SN74HC86N				
UL4	8-759-947-59	IC PST-523D				
UL301	8-759-901-23	IC SN74LS123N				
UL302	8-759-900-10	IC SN74LS10N				

REMOTE 1

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*9-996-157-01	REMOTE 1 BOARD, COMPLETE	

****

<CAPACITOR>

C1	1-126-103-11	ELECT	470MF	20%	10V
C2	1-126-103-11	ELECT	470MF	20%	10V
C3	1-126-103-11	ELECT	470MF	20%	10V
C4	1-102-518-41	CERAMIC	33PF	5%	50V
C5	1-102-518-41	CERAMIC	33PF	5%	50V
C6	1-102-518-41	CERAMIC	33PF	5%	50V
C10	1-126-234-11	ELECT	2200MF	20%	10V
C11	1-126-234-11	ELECT	2200MF	20%	10V
C12	1-126-234-11	ELECT	2200MF	20%	10V
C13	9-996-186-01	CERAMIC	0.1MF		50V
C14	9-996-186-01	CERAMIC	0.1MF		50V
C21	1-126-541-11	ELECT	330MF	20%	16V
C22	1-123-356-00	ELECT	10MF	20%	16V
C23	1-123-356-00	ELECT	10MF	20%	16V
C24	1-123-356-00	ELECT	10MF	20%	16V
C25	1-126-541-11	ELECT	330MF	20%	16V
C26	9-996-186-01	CERAMIC	0.1MF		50V
C27	9-996-186-01	CERAMIC	0.1MF		50V
C29	9-996-186-01	CERAMIC	0.1MF		50V
C30	9-996-186-01	CERAMIC	0.1MF		50V
C31	9-996-186-01	CERAMIC	0.1MF		50V
C32	1-102-074-00	CERAMIC	1000PF	10%	50V
C33	1-102-074-00	CERAMIC	1000PF	10%	50V
C101	1-124-252-00	ELECT	0.33MF	20%	50V
C102	1-123-356-00	ELECT	10MF	20%	16V
C103	1-123-330-00	ELECT	22MF	20%	16V
C121	1-124-252-00	ELECT	0.33MF	20%	50V
C122	1-123-356-00	ELECT	10MF	20%	16V
C123	1-123-330-00	ELECT	22MF	20%	16V
C141	1-123-330-00	ELECT	22MF	20%	16V

<CONNECTOR>

CN4	*1-564-594-11	PLUG, CONNECTOR 15P
CN5	*1-564-594-11	PLUG, CONNECTOR 15P

<DIODE>

D3	8-719-200-02	DIODE 10E2
D4	8-719-820-59	DIODE 1S1588
D5	8-719-820-59	DIODE 1S1588
D7	8-719-820-59	DIODE 1S1588
D8	8-719-820-59	DIODE 1S1588
D9	8-719-820-59	DIODE 1S1588
D10	8-719-820-59	DIODE 1S1588
D11	8-719-820-59	DIODE 1S1588
D12	8-719-820-59	DIODE 1S1588
D13	8-719-820-59	DIODE 1S1588
D14	8-719-820-59	DIODE 1S1588
D15	8-719-820-59	DIODE 1S1588
D16	8-719-820-59	DIODE 1S1588

<JACK>

J10	1-568-981-11	MALE CONNECTOR 64P

<TRANSISTOR>

Q1	8-729-195-23	TRANSISTOR 2SA952-K2
Q2	8-729-195-23	TRANSISTOR 2SA952-K2
Q3	8-729-195-23	TRANSISTOR 2SA952-K2
Q4	8-729-195-23	TRANSISTOR 2SA952-K2
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q102	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q103	8-729-140-96	TRANSISTOR 2SD774-34
Q121	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q122	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q123	8-729-140-96	TRANSISTOR 2SD774-34
Q141	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q142	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R4	1-249-408-11	CARBON	180	5%	1/4W
R5	1-249-408-11	CARBON	180	5%	1/4W
R6	1-249-408-11	CARBON	180	5%	1/4W
R7	1-247-804-11	CARBON	75	5%	1/4W
R8	1-247-804-11	CARBON	75	5%	1/4W
R9	1-247-804-11	CARBON	75	5%	1/4W
R12	1-249-413-11	CARBON	470	5%	1/4W
R13	1-249-413-11	CARBON	470	5%	1/4W
R18	1-247-804-11	CARBON	75	5%	1/4W
R19	1-247-804-11	CARBON	75	5%	1/4W
R14	1-249-405-11	CARBON	100	5%	1/4W
R15	1-249-405-11	CARBON	100	5%	1/4W
R16	1-249-405-11	CARBON	100	5%	1/4W
R17	1-249-405-11	CARBON	100	5%	1/4W
R20	1-249-411-11	CARBON	330	5%	1/4W
R21	1-249-411-11	CARBON	330	5%	1/4W
R22	1-249-411-11	CARBON	330	5%	1/4W
R23	1-249-411-11	CARBON	330	5%	1/4W
R24	1-249-409-11	CARBON	220	5%	1/4W
R25	1-249-409-11	CARBON	220	5%	1/4W
R26	1-249-409-11	CARBON	220	5%	1/4W
R27	1-249-425-11	CARBON	4.7K	5%	1/4W
R34	1-249-417-11	CARBON	1K	5%	1/4W
R35	1-249-417-11	CARBON	1K	5%	1/4W
R43	1-249-397-11	CARBON	22	5%	1/4W
R44	1-249-397-11	CARBON	22	5%	1/4W
R45	1-249-425-11	CARBON	4.7K	5%	1/4W
R101	1-249-433-11	CARBON	22K	5%	1/4W
R102	1-247-891-00	CARBON	330K	5%	1/4W
R103	1-247-891-00	CARBON	330K	5%	1/4W
R104	1-249-429-11	CARBON	10K	5%	1/4W
R105	1-249-435-11	CARBON	33K	5%	1/4W
R106	1-249-429-11	CARBON	10K	5%	1/4W
R107	1-249-427-11	CARBON	6.8K	5%	1/4W
R108	1-249-431-11	CARBON	15K	5%	1/4W
R109	1-249-408-11	CARBON	180	5%	1/4W
R110	1-249-414-11	CARBON	560	5%	1/4W
R121	1-249-433-11	CARBON	22K	5%	1/4W
R122	1-247-891-00	CARBON	330K	5%	1/4W
R123	1-247-891-00	CARBON	330K	5%	1/4W
R124	1-249-429-11	CARBON	10K	5%	1/4W
R125	1-249-435-11	CARBON	33K	5%	1/4W
R126	1-249-429-11	CARBON	10K	5%	1/4W
R127	1-249-427-11	CARBON	6.8K	5%	1/4W
R128	1-249-431-11	CARBON	15K	5%	1/4W
R129	1-249-408-11	CARBON	180	5%	1/4W
R130	1-249-414-11	CARBON	560	5%	1/4W

REMOTE 1

SW & CONTROL

REF.NO.	PART NO.	DESCRIPTION				REMARK
R141	1-249-429-11	CARBON	10K	5%	1/4W	
R142	1-249-429-11	CARBON	10K	5%	1/4W	
R143	1-249-433-11	CARBON	22K	5%	1/4W	
R144	1-249-415-11	CARBON	680	5%	1/4W	
R145	1-249-413-11	CARBON	470	5%	1/4W	
		<RELAY>				
RL1	1-517-757-11	RELAY				
RL2	1-517-757-11	RELAY				
RL3	1-517-757-11	RELAY				
RL4	9-996-184-01	RELAY				
		<TRANSFORMER>				
T101	9-996-891-01	TRANSFORMER, LINE MATCHING				
T121	9-996-891-01	TRANSFORMER, LINE MATCHING				
		<IC>				
U1	9-996-108-01	IC 4C0040				
U2	9-996-108-01	IC 4C0040				
U3	9-996-108-01	IC 4C0040				
UL1	8-759-354-52	IC HD75452P				
UL2	9-996-109-01	IC SN75175				

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*9-996-884-01 SW & CONTROL BOARD, COMPLETE
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REF.NO.	PART NO.	DESCRIPTION				REMARK
		<CAPACITOR>				
C1	9-996-186-01	CERAMIC	0.1MF			50V
C2	1-123-356-00	ELECT	10MF	20%		16V
C3	1-102-106-00	CERAMIC	100PF	10%		50V
C4	1-102-106-00	CERAMIC	100PF	10%		50V
C5	1-102-106-00	CERAMIC	100PF	10%		50V
C6	1-102-106-00	CERAMIC	100PF	10%		50V
C7	1-102-106-00	CERAMIC	100PF	10%		50V
C8	1-102-106-00	CERAMIC	100PF	10%		50V
C9	1-102-106-00	CERAMIC	100PF	10%		50V
C10	1-102-106-00	CERAMIC	100PF	10%		50V
C11	1-102-106-00	CERAMIC	100PF	10%		50V
C12	1-102-106-00	CERAMIC	100PF	10%		50V
C13	9-996-186-01	CERAMIC	0.1MF			50V
C14	9-996-186-01	CERAMIC	0.1MF			50V
C15	9-996-186-01	CERAMIC	0.1MF			50V
C16	9-996-186-01	CERAMIC	0.1MF			50V
C17	9-996-186-01	CERAMIC	0.1MF			50V
C18	9-996-186-01	CERAMIC	0.1MF			50V
C19	1-102-978-41	CERAMIC	220PF	5%		50V
C20	1-102-978-41	CERAMIC	220PF	5%		50V
C21	9-996-185-01	CERAMIC	0.01MF			50V
C22	9-996-186-01	CERAMIC	0.1MF			50V
C23	9-996-186-01	CERAMIC	0.1MF			50V
C24	9-996-186-01	CERAMIC	0.1MF			50V
C25	9-996-186-01	CERAMIC	0.1MF			50V
C26	9-996-185-01	CERAMIC	0.01MF			50V
C27	9-996-186-01	CERAMIC	0.1MF			50V
C28	1-102-518-41	CERAMIC	33PF	5%		50V
C29	1-102-518-41	CERAMIC	33PF	5%		50V
C31	9-996-186-01	CERAMIC	0.1MF			50V
C33	9-996-186-01	CERAMIC	0.1MF			50V
C34	1-102-106-00	CERAMIC	100PF	10%		50V
C35	1-123-356-00	ELECT	10MF	10%		16V
C36	1-123-356-00	ELECT	10MF	10%		16V
C38	9-996-186-01	CERAMIC	0.1MF			50V
C39	9-996-186-01	CERAMIC	0.1MF			50V
C40	9-996-186-01	CERAMIC	0.1MF			50V
C41	9-996-186-01	CERAMIC	0.1MF			50V
C42	9-996-186-01	CERAMIC	0.1MF			50V
C43	9-996-186-01	CERAMIC	0.1MF			50V
C44	9-996-186-01	CERAMIC	0.1MF			50V
C45	9-996-186-01	CERAMIC	0.1MF			50V
C46	9-996-186-01	CERAMIC	0.1MF			50V
C47	9-996-186-01	CERAMIC	0.1MF			50V
C48	9-996-186-01	CERAMIC	0.1MF			50V
C49	9-996-186-01	CERAMIC	0.1MF			50V
C50	9-996-186-01	CERAMIC	0.1MF			50V
C51	9-996-186-01	CERAMIC	0.1MF			50V
C52	9-996-186-01	CERAMIC	0.1MF			50V
C53	9-996-186-01	CERAMIC	0.1MF			50V
C54	9-996-186-01	CERAMIC	0.1MF			50V
C55	9-996-186-01	CERAMIC	0.1MF			50V
C56	9-996-186-01	CERAMIC	0.1MF			50V
		<CONNECTOR>				
CN3	*1-564-516-11	PLUG, CONNECTOR 13P				
CN8	*1-564-515-11	PLUG, CONNECTOR 12P				
CN9	*9-996-198-01	PIN HEADER, BOX TYPE				
		<OSCILLATOR>				
CR1	1-567-192-11	CERAMIC OSCILLATOR				
CR2	1-527-476-00	CERAMIC OSCILLATOR				
		<DIODE>				
D1	8-719-820-59	DIODE 1S1588				
D2	8-719-820-59	DIODE 1S1588				
D3	8-719-820-59	DIODE 1S1588				
D5	8-719-109-93	DIODE RD6.2ES-B2				
D6	8-719-820-59	DIODE 1S1588				
D7	8-719-820-59	DIODE 1S1588				
		<TRANSISTOR>				
Q1	8-729-140-96	TRANSISTOR 2SD774-34				
Q2	8-729-140-96	TRANSISTOR 2SD774-34				
Q3	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q4	8-729-140-96	TRANSISTOR 2SD774-34				
Q6	8-729-140-96	TRANSISTOR 2SD774-34				
		<RESISTOR>				
R1	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2	1-249-404-11	CARBON	82	5%	1/4W	
R3	1-249-421-11	CARBON	2.2K	5%	1/4W	
R4	1-249-419-11	CARBON	1.5K	5%	1/4W	
R5	1-249-413-11	CARBON	470	5%	1/4W	
R6	1-249-413-11	CARBON	470	5%	1/4W	
R7	1-249-429-11	CARBON	10K	5%	1/4W	
R8	1-249-429-11	CARBON	10K	5%	1/4W	
R9	1-249-429-11	CARBON	10K	5%	1/4W	
R10	1-249-429-11	CARBON	10K	5%	1/4W	
R11	1-249-429-11	CARBON	10K	5%	1/4W	
R12	1-249-429-11	CARBON	10K	5%	1/4W	
R13	1-249-413-11	CARBON	470	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R14	1-249-413-11	CARBON	470	5%	1/4W	
R15	1-249-413-11	CARBON	470	5%	1/4W	
R16	1-249-413-11	CARBON	470	5%	1/4W	
R17	1-249-413-11	CARBON	470	5%	1/4W	
R18	1-249-413-11	CARBON	470	5%	1/4W	
R19	1-249-413-11	CARBON	470	5%	1/4W	
R20	1-249-413-11	CARBON	470	5%	1/4W	
R21	1-249-429-11	CARBON	10K	5%	1/4W	
R22	1-249-429-11	CARBON	10K	5%	1/4W	
R23	1-249-429-11	CARBON	10K	5%	1/4W	
R24	1-249-429-11	CARBON	10K	5%	1/4W	
R25	1-249-429-11	CARBON	10K	5%	1/4W	
R26	1-249-435-11	CARBON	33K	5%	1/4W	
R27	1-249-421-11	CARBON	2.2K	5%	1/4W	
R28	1-249-421-11	CARBON	2.2K	5%	1/4W	
R29	1-249-429-11	CARBON	10K	5%	1/4W	
R30	1-249-429-11	CARBON	10K	5%	1/4W	
R32	1-249-425-11	CARBON	4.7K	5%	1/4W	
R33	1-249-441-11	CARBON	100K	5%	1/4W	
R34	1-249-433-11	CARBON	22K	5%	1/4W	
R35	1-249-429-11	CARBON	10K	5%	1/4W	
R36	1-249-421-11	CARBON	2.2K	5%	1/4W	
R37	1-249-421-11	CARBON	2.2K	5%	1/4W	
R38	1-249-421-11	CARBON	2.2K	5%	1/4W	
R39	1-249-421-11	CARBON	2.2K	5%	1/4W	
R40	1-249-421-11	CARBON	2.2K	5%	1/4W	
R41	1-249-401-11	CARBON	47	5%	1/4W	
R42	1-249-441-11	CARBON	100K	5%	1/4W	
R43	1-249-397-11	CARBON	22	5%	1/4W	
R44	1-249-413-11	CARBON	470	5%	1/4W	
R45	1-249-417-11	CARBON	1K	5%	1/4W	
R46	1-249-417-11	CARBON	1K	5%	1/4W	
R47	1-249-397-11	CARBON	22	5%	1/4W	
R48	1-249-429-11	CARBON	10K	5%	1/4W	
R50	1-249-429-11	CARBON	10K	5%	1/4W	
R51	1-249-421-11	CARBON	2.2K	5%	1/4W	
R53	1-249-421-11	CARBON	2.2K	5%	1/4W	
R54	1-249-404-11	CARBON	82	5%	1/4W	
R55	1-249-417-11	CARBON	1K	5%	1/4W	
R61	1-249-397-11	CARBON	22	5%	1/4W	
R62	1-249-435-11	CARBON	33K	5%	1/4W	
R63	1-249-397-11	CARBON	22	5%	1/4W	
R64	1-249-397-11	CARBON	22	5%	1/4W	
R65	1-249-397-11	CARBON	22	5%	1/4W	
R66	1-249-397-11	CARBON	22	5%	1/4W	
R67	1-249-397-11	CARBON	22	5%	1/4W	
R68	1-249-397-11	CARBON	22	5%	1/4W	
R69	1-249-397-11	CARBON	22	5%	1/4W	
R70	1-249-397-11	CARBON	22	5%	1/4W	
R71	1-249-397-11	CARBON	22	5%	1/4W	
R72	1-249-397-11	CARBON	22	5%	1/4W	
R76	1-249-429-11	CARBON	10K	5%	1/4W	
R77	1-249-429-11	CARBON	10K	5%	1/4W	
R78	1-249-429-11	CARBON	10K	5%	1/4W	
R79	1-249-429-11	CARBON	10K	5%	1/4W	
R80	1-249-429-11	CARBON	10K	5%	1/4W	
R81	1-249-429-11	CARBON	10K	5%	1/4W	
R82	1-249-429-11	CARBON	10K	5%	1/4W	
R83	1-249-429-11	CARBON	10K	5%	1/4W	
R84	1-249-429-11	CARBON	10K	5%	1/4W	
R85	1-249-417-11	CARBON	1K	5%	1/4W	
R86	1-249-417-11	CARBON	1K	5%	1/4W	
R87	1-249-417-11	CARBON	1K	5%	1/4W	
R88	1-249-421-11	CARBON	2.2K	5%	1/4W	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION	REMARK
SW1	9-996-188-01	SWITCH, PUSH	
SW2	9-996-188-01	SWITCH, PUSH	
SW3	9-996-188-01	SWITCH, PUSH	
SW4	9-996-188-01	SWITCH, PUSH	
SW5	9-996-188-01	SWITCH, PUSH	
SW6	9-996-188-01	SWITCH, PUSH	
SW7	9-996-188-01	SWITCH, PUSH	
SW8	9-996-188-01	SWITCH, PUSH	
SW-ON	9-996-196-01	SWITCH, PUSH	
SW-OFF	9-996-197-01	SWITCH, PUSH	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
U1	8-741-148-33	IC SBX1483-59	
UA1	8-759-007-19	IC MC74HC4051N	
UA2	8-759-007-19	IC MC74HC4051N	
UA3	8-759-239-21	IC TC74HC4066AP	
UA4	8-759-007-19	IC MC74HC4051N	
UA5	8-759-947-59	IC PST523D	
UL1	8-759-995-97	IC MB8855-1314N	
UL2	8-759-631-86	IC M50461-152SP	
UL3	8-759-902-44	IC SN74LS244N	
UL4	8-759-202-91	IC TC74HC148P	
UL5	8-759-202-76	IC TC74HC30P	
UL6	8-759-901-23	IC SN74LS123N	
UL7	8-759-202-91	IC TC74HC148P	
UL8	8-759-902-	IC SN74LS140N	
UL9	8-759-916-12	IC SN74HC00N	
UL10	8-759-902-	IC SN74LS140N	
UL11	8-759-004-92	IC MC74HC4049N	
UL13	8-759-202-15	IC TC74HC10P	
UL14	8-759-902-	IC SN74LS140N	
UL15	8-759-916-12	IC SN74HC00N	
UL16	8-759-925-10	IC TL510CP	
UL17	8-759-925-10	IC TL510CP	
UL18	8-759-925-10	IC TL510CP	
UL19	8-759-916-23	IC SN74HC27N	

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*9-996-215-01 IFB-1000 BOARD, COMPLETE
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9-996-113-01 BNC CONNECTOR NUT
9-996-114-01 BNC CONNECTOR TERMINAL

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1	1-126-103-11	ELECT	470MF	20%	10V	
C2	1-126-103-11	ELECT	470MF	20%	10V	
C3	9-996-186-01	CERAMIC	0.1MF			
C4	1-126-103-11	ELECT	470MF	20%	10V	
C10	1-124-360-00	ELECT	1000MF	20%	16V	
C11	1-124-360-00	ELECT	1000MF	20%	16V	
C12	1-124-360-00	ELECT	1000MF	20%	16V	
C13	1-124-360-00	ELECT	1000MF	20%	16V	
C16	1-123-356-00	ELECT	10MF	20%	16V	
C17	1-123-356-00	ELECT	10MF	20%	16V	
C18	1-123-356-00	ELECT	10MF	20%	16V	
C19	9-996-186-01	CERAMIC	0.1MF		50V	
C21	9-996-186-01	CERAMIC	0.1MF		50V	
C22	9-996-186-01	CERAMIC	0.1MF		50V	
C23	1-123-356-00	ELECT	10MF	20%	16V	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C24	9-996-186-01	CERAMIC	0.1MF		50V
C25	1-101-518-41	CERAMIC	33PF	5%	50V
C26	1-101-518-41	CERAMIC	33PF	5%	50V
C27	1-101-518-41	CERAMIC	33PF	5%	50V
C28	1-102-978-41	CERAMIC	220PF	5%	50V
C29	1-102-978-41	CERAMIC	220PF	5%	50V
C30	1-102-978-41	CERAMIC	220PF	5%	50V
C31	1-102-959-00	CERAMIC	22PF	5%	50V
C32	1-102-959-00	CERAMIC	22PF	5%	50V
C33	1-102-959-00	CERAMIC	22PF	5%	50V
C34	9-996-186-01	CERAMIC	0.1MF		50V
C35	9-996-186-01	CERAMIC	0.1MF		50V
C36	1-126-101-11	ELECT	100MF	20%	10V
C101	1-124-252-00	ELECT	0.33MF	20%	50V
C102	1-123-330-00	ELECT	22MF	20%	16V
C103	9-996-186-01	CERAMIC	0.1MF		50V
C111	1-124-252-00	ELECT	0.33MF	20%	50V
C112	1-123-330-00	ELECT	22MF	20%	16V
C113	1-123-356-00	ELECT	10MF	20%	16V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
CN1	9-997-224-01	S TERMINAL CONNECTOR
CN2	9-997-224-01	S TERMINAL CONNECTOR
CN3	9-996-112-01	BNC CONNECTOR (WITHOUT SWITCH)
CN4	9-997-225-01	BNC CONNECTOR (WITH SWITCH)
CN6	9-996-115-01	PIN JACK
CN7	9-996-116-01	PIN JACK

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D1	8-719-820-59	DIODE 1S1588
D2	8-719-200-02	DIODE 10E2
D101	8-719-820-59	DIODE 1S1588
LD1	9-996-110-01	DIODE VR3668S
ZD1	8-719-109-80	DIODE RD4.7ES-B1

<JACK>

REF.NO.	PART NO.	DESCRIPTION
J1	*1-568-981-11	MALE CONNECTOR 64P
J2	*1-564-519-11	PLUG, CONNECTOR 4P

<COIL>

REF.NO.	PART NO.	DESCRIPTION
L1	1-408-877-00	INDUCTOR (LF-8S)
L2	1-408-877-00	INDUCTOR (LF-8S)
L3	1-408-877-00	INDUCTOR (LF-8S)

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q1	8-729-212-02	TRANSISTOR 2SC2120-Y
Q2	8-729-212-02	TRANSISTOR 2SC2120-Y
Q3	8-729-195-23	TRANSISTOR 2SA952
Q4	8-729-212-02	TRANSISTOR 2SC2120-Y
Q5	8-729-212-02	TRANSISTOR 2SC2120-Y
Q6	8-729-212-02	TRANSISTOR 2SC2120-Y
Q7	8-729-212-02	TRANSISTOR 2SC2120-Y
Q8	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q9	8-729-202-99	TRANSISTOR 2SB1016-Y
Q10	8-729-212-02	TRANSISTOR 2SC2120-Y
Q11	8-729-212-02	TRANSISTOR 2SC2120-Y
Q12	8-729-212-02	TRANSISTOR 2SC2120-Y
Q101	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q102	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q111	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1	1-247-804-11	CARBON	75	5%	1/4W	
R2	1-247-804-11	CARBON	75	5%	1/4W	
R3	1-247-804-11	CARBON	75	5%	1/4W	
R4	1-247-804-11	CARBON	75	5%	1/4W	
R5	1-247-804-11	CARBON	75	5%	1/4W	
R6	1-247-804-11	CARBON	75	5%	1/4W	
R7	1-249-429-11	CARBON	10K	5%	1/4W	
R8	1-249-423-11	CARBON	3.3K	5%	1/4W	
R9	1-249-419-11	CARBON	1.5K	5%	1/4W	
R10	1-249-419-11	CARBON	1.5K	5%	1/4W	
R11	1-249-419-11	CARBON	1.5K	5%	1/4W	
R12	1-249-429-11	CARBON	10K	5%	1/4W	
R14	1-249-423-11	CARBON	3.3K	5%	1/4W	
R15	1-249-417-11	CARBON	1K	5%	1/4W	
R16	1-249-417-11	CARBON	1K	5%	1/4W	
R17	1-249-417-11	CARBON	1K	5%	1/4W	
R18	1-249-408-11	CARBON	180	5%	1/4W	
R19	1-249-408-11	CARBON	180	5%	1/4W	
R20	1-249-408-11	CARBON	180	5%	1/4W	
R21	1-249-402-11	CARBON	56	5%	1/4W	
R22	1-249-428-11	CARBON	8.2K	5%	1/4W	
R23	1-249-426-11	CARBON	5.6K	5%	1/4W	
R24	1-249-417-11	CARBON	1K	5%	1/4W	
R25	1-249-419-11	CARBON	1.5K	5%	1/4W	
R26	1-249-419-11	CARBON	1.5K	5%	1/4W	
R27	1-249-474-11	CARBON	1	5%	1/2W	F
R101	1-247-891-00	CARBON	330K	5%	1/4W	
R102	1-247-891-00	CARBON	330K	5%	1/4W	
R103	1-249-402-11	CARBON	56	5%	1/4W	
R104	1-249-433-11	CARBON	22K	5%	1/4W	
R105	1-249-418-11	CARBON	1.2K	5%	1/4W	
R106	1-249-435-11	CARBON	33K	5%	1/4W	
R107	1-247-901-11	CARBON	820K	5%	1/4W	
R108	1-247-901-11	CARBON	820K	5%	1/4W	
R109	1-247-891-00	CARBON	330K	5%	1/4W	
R111	1-247-891-00	CARBON	330K	5%	1/4W	
R112	1-247-891-00	CARBON	330K	5%	1/4W	
R113	1-249-402-11	CARBON	56	5%	1/4W	
R114	1-249-433-11	CARBON	22K	5%	1/4W	
R115	1-249-418-11	CARBON	1.2K	5%	1/4W	
R117	1-247-901-11	CARBON	820K	5%	1/4W	
R118	1-247-901-11	CARBON	820K	5%	1/4W	
R119	1-247-891-00	CARBON	330K	5%	1/4W	

<RELAY>

REF.NO.	PART NO.	DESCRIPTION
RL1	1-515-757-11	RELAY
RL2	1-515-757-11	RELAY
RL3	1-515-757-11	RELAY
RL4	1-515-757-11	RELAY

<IC>

REF.NO.	PART NO.	DESCRIPTION
U1	9-996-108-01	IC 4C0040
U2	9-996-108-01	IC 4C0040
U3	9-996-108-01	IC 4C0040
UA101	8-759-000-49	IC MC14066BCP
UR1	8-759-982-34	IC RC78M09FA

****

AUDIO IN SUB | IFB-10

*9-996-802-01 AUDIO IN SUB BOARD, COMPLETE
****

9-996-124-01 AUDIO IN CABLE ASSY

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN2	9-996-115-01	PIN JACK	
CN3	9-996-116-01	PIN JACK	

****

*9-996-801-01 IFB-10 BOARD, COMPLETE
****

<CAPACITOR>

C1	1-126-103-11	ELECT	470MF	20%	10V
C2	1-126-103-11	ELECT	470MF	20%	10V
C3	9-996-186-01	CERAMIC	0.1MF		50V
C10	1-124-559-51	ELECT	1000MF	20%	10V
C11	1-124-559-51	ELECT	1000MF	20%	10V
C12	1-124-559-51	ELECT	1000MF	20%	10V
C13	1-124-559-51	ELECT	1000MF	20%	10V
C14	1-124-559-51	ELECT	1000MF	20%	10V
C15	1-124-559-51	ELECT	1000MF	20%	10V
C17	1-123-356-00	ELECT	10MF	20%	16V
C18	1-123-356-00	ELECT	10MF	20%	16V
C19	1-123-356-00	ELECT	10MF	20%	16V
C20	9-996-111-01	CERAMIC	0.1MF		50V
C21	9-996-111-01	CERAMIC	0.1MF		50V
C22	9-996-111-01	CERAMIC	0.1MF		50V
C24	9-996-111-01	CERAMIC	0.1MF		50V
C25	1-123-356-00	ELECT	10MF	20%	16V
C28	1-123-356-00	ELECT	10MF	20%	16V
C29	1-123-333-00	ELECT	100MF	20%	16V
C101	1-124-252-00	ELECT	0.33MF	20%	50V
C102	1-123-330-00	ELECT	22MF	20%	16V
C103	9-996-111-01	CERAMIC	0.1MF		50V
C111	1-124-252-00	ELECT	0.33MF	20%	50V
C112	1-123-330-00	ELECT	22MF	20%	16V
C113	1-123-356-00	ELECT	10MF	20%	10V
C201	1-123-369-00	ELECT	4.7MF	20%	25V
C202	1-123-369-00	ELECT	4.7MF	20%	25V
C203	1-123-356-00	ELECT	10MF	20%	16V
C204	1-123-356-00	ELECT	10MF	20%	16V
C205	1-123-356-00	ELECT	10MF	20%	16V
C206	1-123-356-00	ELECT	10MF	20%	16V
C207	1-102-959-00	CERAMIC	22PF	5%	50V
C208	1-102-959-00	CERAMIC	22PF	5%	50V

<CONNECTOR>

CN1	9 996-112-01	BNC CONNECTOR
CN1	9-996-113-01	NUT
CN1	9-996-114-01	TERMINAL
CN2	9-996-112-01	BNC CONNECTOR
CN2	9-996-113-01	NUT
CN2	9-996-114-01	TERMINAL
CN3	9-996-112-01	BNC CONNECTOR
CN3	9-996-113-01	NUT
CN3	9-996-114-01	TERMINAL
CN4	9-996-112-01	BNC CONNECTOR
CN4	9 996-113-01	NUT
CN4	9-996-114-01	TERMINAL
CN5	9-996-112-01	BNC CONNECTOR
CN5	9-996-113-01	NUT
CN5	9-996-114-01	TERMINAL

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1	8-719-200-02	DIODE 10E2	
D101	8-719-820-59	DIODE 1S1588	
LD1	9-996-110-01	DIODE VR3668S	

<JACK>

J1	*1-568-981-11	MALE CONNECTOR 64P
J2	*1-564-519-11	PLUG, CONNECTOR 4P

<TRANSISTOR>

Q1	8-729-195-23	TRANSISTOR 2SA952
Q2	8-729-212-02	TRANSISTOR 2SC2120-Y
Q3	8-729-212-02	TRANSISTOR 2SC2120-Y
Q4	8-729-212-02	TRANSISTOR 2SC2120-Y
Q5	8-729-212-02	TRANSISTOR 2SC2120-Y
Q6	8-729-202-99	TRANSISTOR 2SB1016-Y
Q7	8-729-212-02	TRANSISTOR 2SC2120-Y
Q101	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q102	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q111	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q203	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q204	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q205	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q206	8-729-119-76	TRANSISTOR 2SA1175-HFE

<RESISTOR>

R1	1-247-804-11	CARBON	75	5%	1/4W	
R2	1-247-804-11	CARBON	75	5%	1/4W	
R3	1-247-804-11	CARBON	75	5%	1/4W	
R4	1-247-804-11	CARBON	75	5%	1/4W	
R5	1-247-804-11	CARBON	75	5%	1/4W	
R6	1-247-804-11	CARBON	75	5%	1/4W	
R7	1-249-423-11	CARBON	3.3K	5%	1/4W	
R8	1-249-419-11	CARBON	1.5K	5%	1/4W	
R10	1-249-419-11	CARBON	1.5K	5%	1/4W	
R11	1-249-419-11	CARBON	1.5K	5%	1/4W	
R12	1-249-429-11	CARBON	10K	5%	1/4W	
R14	1-249-408-11	CARBON	180	5%	1/4W	
R15	1-249-408-11	CARBON	180	5%	1/4W	
R16	1-249-408-11	CARBON	180	5%	1/4W	
R18	1-249-419-11	CARBON	1.5K	5%	1/4W	
R19	1-249-474-11	CARBON	1	5%	1/2W	F
R20	1-249-428-11	CARBON	8.2K	5%	1/4W	
R22	1-249-426-11	CARBON	5.6K	5%	1/4W	
R23	1-249-417-11	CARBON	1K	5%	1/4W	
R101	1-247-891-00	CARBON	330K	5%	1/4W	
R102	1-247-891-00	CARBON	330K	5%	1/4W	
R103	1-249-402-11	CARBON	56	5%	1/4W	
R104	1-249-433-11	CARBON	22K	5%	1/4W	
R105	1-249-418-11	CARBON	1.2K	5%	1/4W	
R106	1-249-435-11	CARBON	33K	5%	1/4W	
R107	1-247-901-11	CARBON	820K	5%	1/4W	
R108	1-247-901-11	CARBON	820K	5%	1/4W	
R109	1-247-891-00	CARBON	330K	5%	1/4W	
R111	1-247-891-00	CARBON	330K	5%	1/4W	
R112	1-247-891-00	CARBON	330K	5%	1/4W	
R113	1-249-402-11	CARBON	56	5%	1/4W	
R114	1-249-433-11	CARBON	22K	5%	1/4W	
R115	1-249-418-11	CARBON	1.2K	5%	1/4W	
R117	1-247-901-11	CARBON	820K	5%	1/4W	
R118	1-247-901-11	CARBON	820K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R119	1-247-891-00	CARBON	330K	5%	1/4W	
R201	1-249-417-11	CARBON	1K	5%	1/4W	
R202	1-249-417-11	CARBON	1K	5%	1/4W	
R203	1-249-429-11	CARBON	10K	5%	1/4W	
R204	1-249-429-11	CARBON	10K	5%	1/4W	
R205	1-249-429-11	CARBON	10K	5%	1/4W	
R206	1-249-429-11	CARBON	10K	5%	1/4W	
R207	1-249-441-11	CARBON	100K	5%	1/4W	
R208	1-249-441-11	CARBON	100K	5%	1/4W	
R209	1-249-437-11	CARBON	47K	5%	1/4W	
R210	1-249-437-11	CARBON	47K	5%	1/4W	
R211	1-249-437-11	CARBON	47K	5%	1/4W	
R212	1-249-437-11	CARBON	47K	5%	1/4W	
R213	1-249-441-11	CARBON	100K	5%	1/4W	
R214	1-249-441-11	CARBON	100K	5%	1/4W	
R221	1-249-402-11	CARBON	56	5%	1/4W	
R222	1-249-402-11	CARBON	56	5%	1/4W	
R223	1-249-417-11	CARBON	1K	5%	1/4W	
R224	1-249-417-11	CARBON	1K	5%	1/4W	
		<RELAY>				
RL2	1-515-757-11	RELAY				
RL3	1-515-757-11	RELAY				
RL4	1-515-757-11	RELAY				
		<IC>				
U1	9-996-108-01	IC 4C0040				
U2	9-996-108-01	IC 4C0040				
U3	9-996-108-01	IC 4C0040				
UA101	8-759-000-49	IC MC14066BCP				
UA201	8-759-990-82	IC TL082CP				
UL201	9-996-109-01	IC SN75175				
UR1	8-759-982-34	IC RC78M09FA				
UR21	8-759-982-31	IC RC78M05FA				

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MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION
	⚠ 9-996-146-01	SWITCHING, REGULATOR
	9-996-161-01	14P CONNECTOR, ROUND (MALE) ASSY
	9-996-162-01	14P CONNECTOR, ROUND (FEMALE) ASSY
	9-996-166-01	D-SUB CONNECTOR
	*9-996-160-01	CABLE, COXIAL
CN901	⚠ 9-996-164-01	AC INLET & NOISE FILTER
HN1	*9-996-171-01	HARNESS 1
HN2	*9-996-150-01	HARNESS 2
HN3	*9-996-167-01	HARNESS 3
HN4	*9-996-168-01	HARNESS 4
HN5	*9-996-169-01	HARNESS 5
HN7	*9-996-148-01	HARNESS 7
HN9	*9-996-170-01	HARNESS 9
HN11	*9-996-172-01	HARNESS 11
HN12	*9-996-149-01	HARNESS 12
S901	⚠ 9-996-165-01	MAIN POWER SWITCH

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ACCESSORIES AND PACKING MATERIALS

PART NO.	DESCRIPTION	REMARK
1-465-334-11	REMOTE COMMANDER (RM-1270S)	
⚠ 1-556-760-11	POWER CORD	
*3-704-298-02	BAG (STANDARD), PROTECTION	
3-751-188-01	MANUAL, INSTRUCTION	
7-682-161-01	+7P M4X8	
*9-996-873-01	PANEL, MOUNT RACK	
*9-996-874-01	CUSHION	
*9-996-875-01	INDIVIDUAL CARTON	
9-996-892-01	X BOARD	
9-996-893-01	CABLE	